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Barbarous radiates: a study of the irregular
Roman coinage of the 270s and 280s AD from
southern England.

Submitted for the Degree of PhD.

Department of Archaeology

John A. Davies

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Frontispiece

A barbarous radiate from the Hollingbourne (Kent) hoard.

Copy of Tetricus I, Spes Publica (see Plate 10:2, 19).

Scale 4:1

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'A hoard of "radiate" coins from Allington', Archaeologia Cantiana 98, (1982).

'The barbarous radiates from Richborough', British Numismatic Journal 52, (1982).

'The Roman coins from Lowbury Hill', Oxoniensia 55, (1985).

'The Meare Heath, Somerset, hoard and the coinage of barbarous radiates', Numismatic Chronicle 146, (1986).

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Abstract

Barbarous radiates are imitation antoniniani of the late-third century. They are found in a variety of sizes and quality and are among the most common coin types recovered from Roman Britain. They are found on sites and in hoards throughout the Mediterranean world but predominantly in Britain and France. The study of barbarous radiates, which has been mainly restricted to hoards, has a long history but these coins are not well-understood. This thesis represents the first systematic study of site finds, employing the south of England as the study area.

Initially, the history of previous research is reviewed, summarising current opinion (chapter 2). An analysis of the regular coinage of the 260's to 280's, from which barbarous radiates were derived, is outlined and methods of distinguishing the imitations from official coins are described (chapter 3). The question of classification and a description of known die- and style-groups are discussed (chapter 4).

Some 16,000 barbarous radiates were recorded and they are studied by site, within each county (chapters 6-10). That total also includes a number of comparative examples recorded in France (chapter 11). A summary of new die- and style-associations is then presented, together with discussion of the sources of production (chapter 12).

Distinct patterns have been found between different categories of barbarous radiate hoard, relating to differences in coin use (chapter 13). Comparison of coin lists from provinces across the Roman Empire also helps to provide a context for the use of these coins in Britain (chapter 14). In concluding chapters it is argued that this coinage was

associated with the development of a full monetary economy across Britain, within a climate of late-third century prosperity.

Chapter 1. Introduction

'Rude nonedescript brass coins...imitations
of Roman types', J.Y.Akerman, 1848

Akerman's description of the coins popularly known today as barbarous radiates shows an awareness of this problematic coin type in the mid-nineteenth century. His few words sum up the characteristics shown within this series; the features of being simple, roughly made and hard to classify. Yet, they were also seen to have been copies of recognised Roman coins. Scholarship into Roman coins has continued to progress steadily since Akerman's day, with the compilation of invaluable reference works including those by Cohen (1880-92), the R.I.C. series (Mattingly, Sydenham et al., 1923-81), Crawford (1974) and Elmer's scheme for the Gallic Empire (Elmer 1941). Our understanding of imitative, or irregular, coin series has also progressed steadily, although synthetic reference works are not yet possible. The problems recognised by Akerman are still major obstacles to the compilation of such volumes. This study is concerned specifically with the coinage of barbarous radiates. The study area has been concentrated in the south of England for practical reasons, although similar work could be continued in other parts of Britain if resources were available. In this chapter an outline of the problems posed to the study of barbarous radiates will be considered; followed by an outline of the objectives of this research.

Barbarous radiates are copies of the base metal antoniniani of the later third century. They are found in a variety of sizes and quality; ranging from an extreme diameter

of about 23mm, down to a mere 5 or 6mm. The engravings range from a quality indistinguishable from that of the regular coinage through to very crude and stylised, with a seemingly infinite range of quality and style employed between these extremes. The single ever-present feature which unites the appearance of this otherwise hugely variable coinage is the obverse radiate crown, from which their descriptive name is derived. The spiky crown of sun rays is recognisable even if the legend or even portrait engraving are missing, allowing recognition except in only the most extremely worn and corroded pieces.

Barbarous radiates are imitative coins. Their engravings were copies from coin types produced at the official mints of the Gallic Empire and the Central Roman Empire between the years of approximately the late 260's and the late 270's. The engravers of these coins generally did not invent types. Those poorer imitations which are difficult to reconcile with known prototypes can usually be seen to be the result of successive copying of copies.

These coins are among the most profuse types of Roman coin recovered in Britain. They are regularly turned up by excavation, field walking and metal detecting in all parts of Britain occupied during the Roman period, without a noticeable concentration in any specific area. Similarly, they are regularly found to be present in coin hoards from all parts of the Roman province. In coin lists and histograms they are assigned to Reece's period XI, dated from 275-94. Although some examples were manufactured either side of 275, it was considered that they should be allocated to the period when they circulated (Reece 1972, 273).

As well as circulating in Britain, barbarous radiates were

also used profusely in Gaul. They have also been found, in varying proportions, on sites and in hoards throughout the Mediterranean world. They are less common outside Britain and Gaul.

These irregular antoniniani are referred to as 'imitations locales' in France and in French speaking countries. The name antoninianus, which is a reference to its originator Caracalla (Antoninus), has often been replaced by the less cumbersome term 'radiate'. The adjective 'barbarous' was employed by Akerman, during the nineteenth century, in order to describe the predominantly poorer quality examples. The combination barbarous radiate remained in use due to the lack of any popular alternative and to a lack of understanding of this coinage. The name is not popular with numismatists because of its archaic and colourful implications. Although the terms 'irregular' and 'unofficial' antoninianus are more accurate useage, barbarous radiate has become readily identifiable with this type of coin and is still considered acceptable.

The terms counterfeit and forgery are not used here in association with this coinage. They do have implications of a degree of fraudulence and deception, which is by no means clear in the case of barbarous radiates. Counterfeiting did take place during the Roman period and Boon has discussed the major epidemics (Boon 1974a). There were three other major outbreaks of imitations which affected Britain. These were the Claudian imitations of the first century and the Constantinian copies of the fourth century, both of which have been the subject of recent and continuing investigation (Hammerson 1980; Kenyon forthcoming), and the 'Falling Horseman' copies of 354-64 (Boon 1974). Barbarous radiates have certainly generated more

literature than the others but have not received any detailed synthesis.

Our knowledge of barbarous radiates has been pieced together by the patience of workers who, despite the frustrations and continually open-ended questions involved, have established an invaluable framework of scholarship. This knowledge has been constructed almost exclusively from hoard studies. Barbarous radiates, as site finds, have not been the subject of study in their own right. As long as 50 years ago Sutherland pointed to the problem in the following way, 'Among...site finds they form an ever-present element; so numerous are they, indeed, that they have usually been simply labelled "barbarous radiates" and thrown on one side, with the consequent sacrifice of examination and analysis' (Sutherland 1937). Sadly, this observation has largely remained a valid one. What, then, are the problems that have precluded a more systematic study of barbarous radiates in general and site finds in particular? Some of these problems can be reviewed here in order to explain the approach to the study employed in subsequent chapters.

Barbarous radiates imitate a restricted range of official coin types struck from the 260's and 270's. Despite this, the sheer number of variations and diversity of engraving styles encountered is formidable and seemingly inexhaustible. Coupled with the vast number of coins involved, the problem of classification magnifies considerably. This variety is such that it has been impossible to attempt to catalogue the types, in the way that the RIC presents regular types (Mattingly, Sydenham et al., 1923-81). The quality of many of these coins is usually very poor, which has also been a barrier to systematic study. Therefore, attempts to catalogue them in any

but the most general terms of obverse and reverse type has so far proven impossible.

The lack of intrinsic value and poor standard of die-engraving has led to numismatists and collectors alike neglecting them in favour of more rewarding regular coin series. The lack of a recognised catalogue or scheme against which to sort a collection also serves to lessen interest. Consequently, no real interest has grown up among collectors. Although examples are present in almost all collections because of their ready availability they are neglected and are not systematically supplemented.

Examples from hoards are usually much better preserved than site finds, which suffer more acutely from circulation wear. Hoards often contain die-linked coins, which enables a basic framework to be constructed for a written report. Hoards are generally more amenable to productive study than site finds and it has been largely from such research that our current knowledge of these coins comes. However, it has become increasingly more difficult to say more about this curious currency without recourse to different types of data. In this study it is proposed to employ the firm knowledge established from the study of hoard coins in a study of the site finds which have so received very little attention.

During the following chapters, previous scholarship will be drawn together in order to establish a coherent summary of the state of current research. A large body of new data will be presented from the largely unstudied site finds of southern England. Die-links and other patterns in the coinage and its distribution will be studied. Other published information on barbarous radiates will also be reviewed in order to supplement

this data. It is intended that the presentation of this information will go some way towards providing a reference work for subsequent workers.

The basis of this study of barbarous radiates has been the recording of site finds at first hand from a wide area of Britain. However, it is stressed at the outset that this thesis is not intended to represent a grand corpus of these coins. A detailed study of material from a variety of sites and from both systematic and non-systematic collections, from a restricted area, has been attempted. The results are complemented by other published information. New coins are being discovered continually and any attempt at a comprehensive catalogue of barbarous radiates would immediately be out of date and incomplete. However, a catalogue of the coins studied does accompany the main thesis, for reference purposes, together with as many illustrated examples as was economically possible to reproduce. Photography was of particular importance in the recording of data, allowing detailed analysis and comparison of different site collections. Accordingly, a very large archive collection of photographs has been assembled. The presentation of a saturation coverage of photographs is not a necessary, nor possible, compliment to this thesis. Those coins selected for illustration are considered adequate to support observations and information presented in the text. It is eventually intended to make available a comprehensive photographic record as an archive in its own right, at an accessible location, for the use of future scholars of this coinage.

During the course of this introduction the frustrating nature of studying this particular coinage will have become apparent. Conversely, the seemingly endless variety of types

encountered can serve as a stimulus to fresh interest beyond that possible within any single series of regular coinage.

Introduction

Barbarous radiates are known to have circulated essentially in the north-western provinces of the Roman Empire; mainly in Britain and Gaul, but also Germany and also in north Africa (Callu 1969, 303). They are also reported in coin collections from other provinces across the Roman world. An assessment of their occurrence elsewhere will be made in chapter 14. Britain and France are the main countries involved and each has its own tradition of scholarship within the disciplines of archaeology and numismatics. Theories have often developed separately and it is unfortunate that there has not been more debate between the two countries - a situation exacerbated by the language barrier. Consequently, literature concerned with barbarous radiates did not benefit from a concerted effort; with theory generated in one country not always being fully considered in the other. In this chapter previous literature concerned with barbarous radiates will be outlined and reviewed. Our knowledge of these coins has been built up piecemeal over many years in short papers, in English and in French. There is no synthetic text but the better ideas have become established in a consensus of current opinion on the subject. The most influential articles will be outlined here and assessed together in order to clarify the current situation.

Much of the literature has been concerned with the chronology of these coins, centring around the acceptance of either an 'early date' or a 'late date' for them. The former refers to the striking and use on a contemporary, or near-contemporary, basis with their official counterparts, during the late third century. The latter concept refers to the

argument that barbarous radiates were a fourth century, or even later, phenomenon.

To 1960: towards a chronology

Barbarous radiates have been recognised and studied in France certainly since the eighteenth century. At various times they were thought to have been struck by the Goths or by the Alamanni (Callu 1969, 304). During the early and mid-nineteenth century in Britain, barbarous radiates were recognised as being unusual, imitative coins, and were sometimes considered to belong to Dark Age Britain, of the fifth century or later. In his 'Introduction to the Study of Ancient and Modern Coins', J.Y.Akerman included them in a section labelled,

'Rude Nondescript Brass Coins - Barbarous
Imitations of Roman Types' (Akerman 1848).

The term 'barbarous' became associated and a number of observations about the coinage were made. Akerman noted,

'the greater part have an attempt to depict a human head with a radiate crown like that worn by Victorinus and Postumus, a circumstance which might incline some to the opinion that they are the produce of illicit mints in the days of those usurpers; but it is not improbable that they were struck in this country in the interval between the departure of the Romans, and the arrival or settlement of the Saxons' (Akerman 1848).

So Akerman considered the possibility of an early date and also recognised that they were struck in Britain. The reason why many people preferred a late date was described by Gunston in

an account of the Southwark hoard, discovered in 1864. Gunston described the coins as follows:

'It is difficult to decide who are intended by the profiles on many of these pieces, the legends being as uncouth as the lineaments. Two, of very barbaric fabric, with heads encircled by spiked crowns, have on the reverse square devices closely resembling those seen on the early Saxon Sceattas' (Gunston 1864).

A late dating was therefore being argued on the grounds of stylistic similarity between some examples in the series and early Saxon coins.

At this time the term 'barbarous' was being applied to these coins with increasing frequency, as among the catalogue of the Netley Abbey hoard (de Chaumont 1867). J.F. Nicholls reflected the climate of curiosity in his description of the Filton hoard presented to the Society of Antiquaries in London:

'I am at a loss to name these, and enclose a few as a specimen; they run very irregular in size and shape, but have the greater portion of a crowned head on the obverse - it is in every case in these lesser coins a spiked or rayed crown, which is, I think, a symbol of a British emperor. I have long thought that these are specimens of emergency money of the British usurpers' (Nicholls 1879-81).

So there were others who favoured an early date, during the nineteenth century. Others who preferred this idea included Roach Smith. In an article on the Roman coins from Richborough he stated,

'In this list, the small pieces termed minimi, must be attributed to the Tetrici' (Roach Smith 1889).

Similarly, in the publication of the settlement of Woodyates and Bokerly Dyke in 1888-91, Pitt Rivers assigned these coins to the category of the official emperors. One very clearly irregular example recorded is listed under the Tetrici in the catalogue (Pitt Rivers 1892).

Opinion in Britain was favouring an earlier dating and in 1910 an important article was published by the French scholar Adrien Blanchet. Briefly, Blanchet came down firmly in favour of the early dating for barbarous radiates and he stated that those of both large and small module belonged to approximately the same date as the original coins. Subsequent prominent British scholars preferred to reject Blanchet's paper, which was accepted by the French. It was to take many years of research before numismatists from the two countries were to be in broad agreement. For the next half century British scholars almost universally turned towards a late dating and argued for this position in a number of major papers. The study of barbarous radiates had now properly begun and one major scholar began his important contributions to the subject during the 1920's.

It was in 1922 that Harold Mattingly outlined a scheme for the chronology of barbarous radiates. Mattingly believed that radiate minims started in about AD 300 and that they continued in use alongside diademed minims (Mattingly 1922). This view was reiterated in the Segontium coin report (Mattingly 1923). Although ordinary copies were considered contemporary, he described a succession of copying from copies, thus arriving at minims which,

'hardly begin before about AD 300 and go on for at least half a century longer' (Mattingly 1923).

This scheme also embraced the concept of a deterioration in quality over time. J.G.Milne described the problem as whether these copies should be considered contemporary with their prototypes or whether they were circulated for a very long duration after (Milne 1931). He agreed that production started at about 270 but considered that the more degraded and smaller examples,

'do not look as if they would be likely to find acceptance if circulated side by side with official issues' (Milne 1931).

Milne concluded that an early Saxon use, in the fifth and sixth centuries, was probable and described cases in which these coins were found in association with Saxon graves (the inclusion of Roman coins generally within Anglo-Saxon burials is now well known and has been considered by S.E.Rigold, 1974).

It is suitable at this point to see how barbarous radiates were treated in the major works of reference for Roman coinage. The volume of RIC which deals with the period from 253 to 294 was first published in 1927 (Webb 1927). These coins were not discussed by the author, although a small number of examples were listed within the coinage of the Tetrici, under the heading of 'Irregular Mints'. Cohen's catalogue was published much earlier than RIC volume 5. Despite the fact that French scholars were aware of these coins, once again, they were not included within this scheme (Cohen 1880-92).

C.H.V.Sutherland entered the debate during the 1930's. In his publication of a hoard of minimi from Bristol he departed from Mattingly's position and considered the dating of radiate minimi to be far too early. He stated,

'it can at least be said with fair assurance that these radiate minimi are not contemporary, or even

nearly so, with their prototypes' (Sutherland 1934). He also agreed that other radiate copies were contemporary but that *minimi*, of both radiate and diademed type, required a fifth-century date, in a post-Roman context. He dated the British hoard to c. AD 450.

B.H. St J.O'Neil added excavated coin evidence to further the discussion. He presented a group of coins, including two barbarous radiates, which he considered to be from a clear late-fourth-century context; of between AD 390-400. Regular antoniniani from the same context were thought to represent the re-use of third-century issues but barbarous radiates were thought to have been still struck freely at this time, and based on the regular examples still in circulation (O'Neil 1935).

Sutherland's next contribution was to provide the most comprehensive study of this coin series ever published, and which still remains useful today. Coinage and Currency, which was published in 1937, was a searching study and set out to achieve an understanding of the use and behaviour of Roman coinage in general (Sutherland 1937). As well as his discussion of radiate imitations, Sutherland included a lengthy appendix on their classification. This remains the most detailed, if largely forgotten, reference on the subject and will be considered again in chapter 4.

Sutherland divided his discussion into two distinct parts, considering contemporary copies and radiate *minimi* as two separate phenomena. However, he was now prepared to allow the first *minimi* to be dated as early as c. 285, followed by a prolonged period of production. The questions of why the imitations were coined, and in what context, were discussed.

Sutherland argued that the first radiate copies were struck by local authorities to counteract a shortage of currency, which he saw as a result of the establishment of the Gallic Empire. The continued irregular production was tied in with repeated shortages of official coin. A mint was postulated at Caistor St Edmund (Norfolk) based on unity of 'fabric and technique' among the coins. With regard to the minimi, a revival at the end of the fourth century was postulated. This idea was based on the stylised designs, such as altars, which resemble designs on early sceattas. The simplified radiate portraits were also seen as similar to those on Anglo-Saxon coins. They were thought to have filled another 'gap' in the coin supply; this time following the Roman withdrawal from Britain.

Sutherland recognised the lack of systematic study into barbarous radiates. Despite the number of third-century hoards studied before 1937, in only a few cases had any careful study of irregular coins been attempted. Many such hoard publications did not even provide absolute numbers. That Coinage and Currency remains a useful reference work after so many years is a tribute to its author, who studied barbarous radiates from such a pioneering position.

A second publication in 1937 provided for the first time good archaeological evidence for the secure dating of radiate minimi of the smallest diameter (Wheeler 1937). The paper was prepared for publication by B.H. St J.O'Neil because of the author's untimely death. The hoard of radiate minimi was discovered at Verulamium and had been sealed in an archaeological context dated to before AD 300. It was seen to establish an 'early' date for minimi in Britain and showed, in this instance at least, that they were contemporary with regular antoniniani. This publication was also valuable in

that it illustrated the entire hoard of 800 coins. This showed an awareness of the problems involved in the study of irregular coinage and made the information accessible to all subsequent scholars.

The publication of a large hoard of 875 imitations from Richborough, discovered in 1931, was used by its authors to further argue the case for a late date (Mattingly and Stebbing 1938). The hoard contained a very varied range of engravings, which the authors did not consider it possible for third-century engravers to arrive at independently. They considered that the engravings betrayed a knowledge of fourth-century reverse types, such as the 'fallen horseman' and Gloria Romanorum, with the emperor dragging a captive. They did not believe that the restricted range of third-century antoniniani could give rise to such a range of diversity. On these grounds, it was argued that the earliest possible date for the hoard was 380-90. It was deduced that the most likely burial date was during the fifth century. In an appendix to the Richborough hoard publication, Derek Allen considered the relationship of sceattas to the Richborough coins (Allen 1938). Progressing from the belief that there were not suitable Roman prototypes for some imitations, Allen looked to the coinage of the Jutes, who accompanied Hengist and Horsa, and concluded that there was a relationship between the designs of barbarous radiates and sceattas. The chronology for barbarous radiates was stretched to as late as Augustin, on these grounds. It can be noted here that this hoard was later reconsidered by H.B. Mattingly (Mattingly 1963, 27-8). Professor Mattingly could, then, say that,

'all of it was evidently manufactured and circulated

in the last three decades of the third century'

(Mattingly 1963).

He later dated the hoard, more precisely, to c. 282 AD

(Mattingly 1964).

In 1939 H. Mattingly published a hoard of radiate minimi from Hove, in Sussex (Mattingly 1939b). This hoard was later to become more important in the light of subsequent finds from the same immediate area. The publication was well supported by illustrations. Coin diameters and weights were also given. Die-links were listed, which were considered to represent local manufacture. The absence of fourth-century influences on reverse types was noted in this case, but a single obverse carries a female head, which was allocated to Helena (337-40). The hoard was thus dated,

'not earlier than the fourth century'.

Subsequent examination of this coin suggests that the portrait could equally represent Severina, wife of Aurelian (270-5).

French scholars had accepted the argument of Blanchet (1910), outlined above, and did not therefore participate in the literature which associated barbarous radiates with fourth century, and Saxon, coinage. The frustration felt towards English numismatists was evident when Blanchet wrote:

'Les erudits anglais, qui ont etudie cette nouvelle branche de la numismatique, avaient d'abord ignore toute la bibliographie de ce qui avait ete ecrit par les chercheurs du continent, et, en particulier, mon memoire de 1910' (Blanchet 1940).

Blanchet's paper of 1940 contained a more general discussion of the coinage. He argued that barbarous radiates were struck at unofficial mints but that this would not have been a secret, 'counterfeit' operation. He developed the idea of regional

production across Gaul which provided coin for everyday transactions. Blanchet began to look for regional stylistic similarities and uniformity of flan preparation. Pierre Le Gentilhomme subsequently followed this approach in his study of a large hoard of antoniniani from La Vineuse, Saone-et-Loire (Le Gentilhomme 1942). This author proposed the idea that the imitations were authorised by local authorities and that they circulated in relation to the territory of a city or specific area. He also considered that a weight standard may have existed within each area. Le Gentilhomme applied these theories to the study of La Vineuse and thought that he could recognise a local mint at work within the collection. Le Gentilhomme's model depicted the unofficial mints as highly organised operations; arranged along the lines of regular mints, with separate officinae employed.

The concept of highly organised regional mints discussed by Le Gentilhomme was very largely theoretical. It was subsequently impossible to substantiate. Other workers attempted to pursue the idea, as in the case of the Bischoffsheim hoard (Bas-Rhin). In this instance the authors attempted to isolate an Alsatian style, to compare with Le Gentilhomme's 'Burgundy style', but their results were unconvincing (Longuet and Banderet 1955).

A monograph was published in 1949 which set out to summarise and to assess the available British data (Hill 1949). The discussion included a section on the classification of barbarous radiates, in which the author attempted to progress from Sutherland's scheme, by employing different grades of copy, in the way Sutherland had done for imitations of Claudius I (Sutherland 1935b). The use of three grades was suggested,

related to declining standards of workmanship. This very subjective approach was never adopted by other scholars. In three lengthy appendices Hill listed known British and Continental hoards and some British site finds, which was a useful summary of the information available on the subject at that time. In the same year, Mattingly noted the potential of stylistic studies, as were being undertaken by the French, and indicated that this approach could lead to progress in the study (Mattingly 1949). This method was followed up in Britain by Hill.

P.V.Hill undertook a study of an unprovenanced hoard of barbarous radiates and attempted to locate its area of origin by die-linking and stylistic similarity (1951b). Three of the hoard coins die-linked to Colchester site finds and others were considered to be similar in style with Colchester coins. A provenance of 'near Colchester' was duly assigned. Unfortunately, the hoard may be suspect. It was obtained from a collector and fourth-century coins were also present within the deposit. However, this was a genuine attempt to make significant progress in the study by first hand examination of hoard and site collections.

In 1956 Dr Sutherland published one further contribution arguing for a 'late' dating (Sutherland 1956). His paper, entitled 'Coinage in Britain in the fifth and sixth centuries' discussed an apparent 'fusion' of types between radiate obverses and fourth-century reverses. Sutherland considered that some of the more degraded reverse types present on radiate minims copied regular issues of a much later date. The author did, however, note that radiate and diademed copies were always mutually exclusive in hoards. This was the last major contribution from those who still believed in the 'late'

dating. Opinion in Britain had been changing in favour of contemporaneity. The arguments for the 'late' dating were effectively swept away by an article published by Kent (Kent 1959). In this major contribution, Dr Kent discussed all of the major episodes of irregular coin production in Roman Britain.

Kent provided evidence from hoards which showed that barbarous radiates were associated with regular antoniniani. Even the smallest were shown to have been in use before the close of the third century. The case for contemporaneity was convincingly carried, as it was also for Constantinian copies of the fourth century. The earlier arguments for pairing barbarous radiates with later reverse types were discredited. The author argued that the reason for the production of these imitative coins was due to a monetary shortage. Kent's overall presentation, of looking at irregular coinages together in a wider context, resulted in a more reasonable solution.

Some leading scholars continued to believe in a minim revival after AD 410 but this was no longer generally accepted. Boon summarised the situation with regard to fourth-century imitations in the following manner,

'to suggest that copies of the type here discussed, or any other type, circulated beyond the limits of the monetary crisis which called them forth, seems ill advised in the extreme' (Boon 1961).

The argument for a third century dating of barbarous radiates had been won. The schism dividing numismatists in France and Britain was repaired.

From 1960 to the 1980's:

questions of production and circulation

The period from 1960 saw a change in direction for the study of barbarous radiates. Attention was no longer focused on the question of chronology and scholars began to study other aspects in more depth. It was in the 1960's that the first papers on the subject by Harold B. Mattingly appeared. There has been occasional confusion of Harold B. Mattingly (now Professor Mattingly) and his father Harold Mattingly, by some archaeologists. The distinction is emphasised here, for those not previously familiar with numismatic literature. It was in 1961 that H. B. Mattingly published the first of his highly influential studies.

The first of H. B. Mattingly's important papers on the subject of barbarous radiates was concerned specifically with two hoards of Roman coins from Calverton, Nottinghamshire (Mattingly 1961). These hoards were dated firmly within the third century, while containing, 'every conceivable type of copy' (op. cit.). The latest copies present were of Probian issues and a pre-Carausian date was argued, of c. 280-2. Mattingly identified die-linked groups of imitations, which he associated with a possible local mint.

The 1960's in France was a period of great interest in the subject, with several important papers being published. The first publication of note was a report on the large hoard from Clamecy (Nièvre) (Giard 1961). This deposit was dominated by irregular issues and the author applied a stylistic study to them in order to try and identify irregular mints in the Clamecy area. He remarked that the manufacture of these coins,

'semble avoir été livrée à l'anarchie; elle ne procède d'aucune règle précise' (Giard, op. cit.).

However, he did note weight standards in some groups. A total of 170, of the 1151 irregular Tetrican issues, were divided into seven groups based on die- and style-links and weight. Giard's interest and knowledge of these coins grew and in his publication of the Saint-Mesmin (Aube) hoard, emphasis was again reserved for the irregular component (Giard 1962). Examples were found which die-linked to the hoards of Clamecy and La Vineuse. In a paper published in the following year he showed that irregular antoniniani were being produced as early as AD 263, in Gaul (Giard 1963).

In England, H.B. Mattingly was turning his attention to the questions of where these coins were manufactured and how far afield they circulated. These aspects were discussed in his publication of the Lightwood hoard, from Staffordshire (Mattingly 1963). A body of new die-links was documented, which included links with other areas, and Mattingly suggested that the study of this data could lead to the identification of specific routes of trade. Links between Calverton and the Rhineland were discussed. Having established that these coins travelled over wide areas, Mattingly was able to disprove the idea that this had been purely local or regional coinage. The concept of a clampdown, or repression, was introduced, to explain the termination of their use. The latest official coinage to have been copied was that of Probus and the repression was dated to his reign and related to an enforcement of Aurelian's coinage reform. Although Mattingly had shown that barbarous radiates circulated over wide areas, in France the term 'locale' became associated with them. Although misleading, the name 'monnayage local' stuck, in the same way that the archaic name 'barbarous radiate' remained in use in

Britain.

Another influential paper was published in Britain in 1964, concerned with a hoard comprised almost entirely of barbarous radiate minimi (Lewis and Mattingly 1964). H.B. Mattingly stated, in relation to the physical similarity between these coins and others from the distant hoards from Calverton, Richborough and Verulamium, that

'even the tiny copies can no longer be thought of as purely local currency' (Mattingly 1964).

Mattingly found many die-groups to be present, some of which also die-linked to others from Calverton and Lightwood in the Midlands. It was concluded that some of the Sussex coins had been struck at a Midlands mint. Burial of this hoard was associated with the concept of a suppression; under Carinus, in 282-3. However, Mattingly believed that barbarous radiates remained in circulation until the reign of Carausius.

Giard's contributions continued with the publication of a hoard from Etaples-su-Mer (Pas-de-Calais) (Giard 1965a). Irregular antoniniani were shown to have been in circulation in large numbers as early as during the fourth consulship of Postumus (AD 266/7). The earliest types, which were much closer imitations of specific regular issues, were contrasted with later, looser, copies. In another paper of the same year Giard now doubted whether it was possible to divide Gaul into regional schools of production, as envisaged by Blanchet (Giard 1965b). He argued that the presence of many styles needs not have represented an equivalent number of mints and that several workers could have worked from a single establishment. Giard now recognised that the available information was insufficient to locate mints precisely, but he defined the area of the 'industry' as a whole, on the continent, to northern Gaul,

bounded by the River Loire and by the boundary of modern Belgium. The main years of production were given as between 269 and 280/1. Giard concluded that this was a very successful coinage, circulating for close to twenty years in total.

In the following year Giard published an account of the hoards from Malicorne (Yonne) and Bonneuil-sur-Marne (Val-de-Marne) (Giard 1966). These hoards were of particular interest because they appeared to have been buried during the reign of Victorinus (268-70), which was towards the beginning of the main period of production. It was shown that there was no interruption to production between the reigns of Postumus and the Tetríci. Giard also thought that some of the copies from Malicorne were from a common mint represented at the hoard of Clamecy, some 50 km distant.

The publication of coin moulds from Whitchurch in Somerset was a particularly interesting addition to the study of third-century irregular coinage (Boon and Rahtz 1966). No dies used in the striking of barbarous radiates had ever been found and the discovery of coin moulds at last provided some hard, securely provenanced, archaeological evidence for the production of irregular antoniniani. The overwhelming majority of barbarous radiates were struck and not cast from moulds. The material present at Whitchurch included cast moulds of official issues of Victorinus and Tetricus, showing that the production of cast copies continued into the early years of the barbarous radiate phenomenon. Although the moulds from Whitchurch were clearly not used in the mainstream production of barbarous radiates, they provide further insight into the overall situation in which irregular coin was produced in quantity and show one place where such production definitely

occurred. However, the authors wished to emphasise that,

'we are inclined to link the Whitchurch production in toto to the earlier, Severan, tradition of counterfeiting, and to disassociate it fully from the struck series of barbarous radiates' (Boon and Rahtz, op.cit., 49-51).

In the same year, another mould of a coin of Tetricus I, in the same tradition as the Whitchurch moulds, was recorded from Clevedon in Somerset (Cunliffe 1966, 71).

H.B. Mattingly's publication of the large hoard from Paternoster Row (Newgate Street) in London provided a further platform for discussion of the coinage and the reinforcement of his previous conclusions (Mattingly 1967a). Mattingly also speculated on the frequency of barbarous radiate mints in Britain; envisaging them at, or near, important towns, including Verulamium, London, Colchester and the fort at Richborough. The same author's report on a third hoard from Sussex comprising mainly radiate minimi, from Goring-on-Sea, was published in the same year (Mattingly 1967b). Similarities in composition with the Worthing hoard (see above, Lewis and Mattingly 1964) were emphasised. Die-links were also found with that hoard, as well as with the Calverton hoard from Staffordshire. An irregular mint was speculated somewhere between Calverton and Sussex, which supplied coin to a wide area of southern Britain. Other coins present were considered to belong to a midlands mint, which had been speculated on the grounds of die-links between Calverton and Lightwood (Mattingly 1963, 22). Thus Mattingly was able to shed more light on the areas of circulation of barbarous radiate mint groups.

In 1967 further archaeological evidence for the production of irregular antoniniani in Britain was published (Boon 1967).

The 'counterfeiter's deposit' in question was excavated at a remote promontory site in south Carmarthenshire (Dyfed). This was a very different deposit to the one from Whitchurch. Here, 315 barbarous radiates were found beneath a hut floor. Associated finds were a fragment of clay crucible (containing a bronze droplet) and some larger copies, in a semi-fused condition. Boon described the hut as a 'coiner's den' in which larger coins were melted down in order to provide metal for the production of Proban minims. In the discussion of the find, Boon outline the chronological framework for barbarous radiates, which is still accepted. Early, cast, counterfeits, such as those produced at Whitchurch, were put at the start of the episode. He anticipated that these would have been intended to pass unnoticed within the regular coinage of 270-4. The later, struck, coinage was generally agreed to have undergone a reduction in module over time. Boon placed imitations of reduced module, but not yet minim, from c. 275 onwards. Minims were assigned to the reign of Probus (276-82), ending under Carus and Carinus, in 282-4.

At the end of the 1960's Giard contributed a major discussion paper (Giard 1969). In 'La monnaie locale en Gaule...' Giard considered all aspects of this coinage, including the historical context and relationship to the inflationary turmoil at the time. Ideas were developed from those expressed in his earlier papers. An increasing number of die-links being found in French hoards showed that these coins circulated over long distances, as had been shown in England by H.B. Mattingly. The locations of hoards containing barbarous radiates in France and the patterns of die-linking being found led Giard to suggest that Brittany and Burgundy were the main

centres of production. He drew attention to the observation that the main area of the hoarding was that which was harrassed by barbarian and pirate raids and offered the question as to whether the barbarians were exacting a form of monetary tribute from the population, which in turn drove the inhabitants to strike this coin. He also emphasised that these coins were guaranteed by public confidence.

The question of *minimi* had not received the same attention in France as in Britain. Giard said that they did form a considerable presence in Gaul. He also considered the wider presence of irregular antoniniani in other countries, such as in Germany, Italy and north Africa - where French scholars were active. Their presence in these areas could not be explained by the political events affecting the Gallic Empire and they were seen as the results of commercial relations with those areas of the Empire. Giard discussed the whole question of the Gallic Empire, inflation and shortage of coin. Imitations were seen to have become more numerous as the regular coinage deteriorated in quality. Any official attempts to control the situation would have been thwarted by barbarian invasions, from 276. He dated the end of the irregular coin circulation to the accession of Diocletian, in 284.

The publication of the Saint-Mard I hoard, from Luxembourg, presented fresh data and discussion in a most lavish format (Lallemand and Thirion 1970). The irregular component is well illustrated in over fifty large-format plates, which provide extensive comparative material for the use of other numismatists. The discussion includes comparison with other hoards in Britain and France, of similar composition and date. Although the irregular component comprised just 32% of the coins present, this portion was well-covered by description and

discussion. The period of maximum production of imitations in Gaul was given as between 273 and 283, on the basis of percentages of copies present within dated hoards. The authors considered, from the same hoard evidence, that British mints were not as active as their Gallic counterparts. Perhaps the most interesting section is that which deals with die-links between Gaul and Britain. The few such examples known in 1970 were mapped, alongside the more numerous links between French hoards.

It was becoming increasingly difficult to make additional firm conclusive statements about barbarous radiates, following the advances made since the late-1950's, on the basis of hoard studies alone. At the start of the 1970's, H.B. Mattingly published a report concerning a hoard of ninety barbarous radiates excavated at Verulamium, at a house in insula XIX, in 1960 (Mattingly 1971). Mattingly understood the problems of working with this coinage and knew that further progress would rely on good, frequent, publication and communication of ideas. He provided complete plates of the Verulamium hoard and wrote,

'we are still so far from understanding this curious currency that each new hoard, however, humble, may help' (Mattingly op.cit.).

The wide range of barbarous radiate engravings and the decline in module was confirmed as having been uniform throughout the country. Mattingly also saw a possible line of progress as the dividing of hoards into categories; based upon composition and date of deposition. Unfortunately, this idea was never followed-up in depth by scholars. Barbarous radiates were considered to have been used as a result of resistance to Aurelian's monetary reform of 274.

In 1972 G.C.Boon published an account of two further counterfeiter's' deposits from the west of Britain (Boon 1972). The main discussion centred around a deposit from White Woman's Hole, a cave in the Mendip Hills of Somerset. Evidence for the production of minimi included sections of cast bronze rod, scraps of bronze, halved and quartered antoniniani, plain minim-sized discs and a hoard of fifty-nine minimi. The second deposit, from Draethen, a Roman lead/silver mine (South Glamorgan), contained sections of cast rod, scraps of metal, cut coin fragments and blanks of minim size. These were important new instances of well-provenanced barbarous radiate production.

Within this paper, Boon explained how the very small imitations in question could have been successfully used in circulation alongside larger coins. He believed that they all originally had a silvery appearance, which is still present on some, while others have a blackish (possibly oxidised silver) surface. It was argued that the silvering would have made them accepted for circulation. With regard to their value, it was considered that neither Gallic Empire nor reformed antoniniani were worth more than four minimi, bearing in mind that the latter were manufactured from quartered antoniniani at White Woman's Hole.

A subsequent paper by the same author was to have a very influential impact on the study of irregular coinages in Britain, as a whole (Boon 1974a). Boon's study in the volume, Coins and the Archaeologist included a review of the coinage of barbarous radiates and the main results of the lengthy period of scholarship were presented. The discussion embraced a physical description of the coins, their chronology, the chronological range of types represented and accounts of the

more important finds, such as the Coygan Camp deposit. This account retained the concept of a suppression of minimi in about 282, related to the enforcement of Aurelian's coin reform, but with their continued circulation and retention of a value as late as c. 286. Boon concluded that even the smallest minimi were intended to pass for antoniniani, at the same value. Later in the same year a version of the paper was published in Scientific American, which presented the concept of 'counterfeiting' in the Roman period as that of a public service (Boon 1974b). The problems of inflation at the time were discussed. The casting of irregular coin was presented as being too slow to meet the resulting demand for coin and an ensuing resort to striking eventually produced imitations of minim size, which could not be manufactured from moulds.

The position as summarised by Boon represented the generally accepted standpoint among numismatists. Not all scholars agreed with all aspects of the case. However, this remained the recognised statement on the subject for some years, as it was at the start of the current study in 1980. Since Boon's papers were prepared there have been other useful additions to the bibliography of barbarous radiate research. In France, important papers have been contributed by Chaurand (1973), Doyen (1980), Christol (1982), Amandry (1984) and Estiot, Amandry and Bompaire (1986). J.-B. Giard has also continued to contribute occasional papers on the subject, although his main field of interest has moved away from the problems of the late third century (Giard 1983a and b). In Britain, research has been continued by Professor H.B. Mattingly (Mattingly and Dolby 1982; Mattingly, forthcoming) and by Dr C.E. King (1981). These papers will not be summarised here but will be considered during the course of other relevant sections of this thesis.

Summary

The currently held views on the coinage of barbarous radiates have been outlined by Boon (1974a and b). The following conclusions have been drawn from the literature outlined in this chapter.

1. Barbarous radiates are no longer considered to have been merely a local coinage. H.B. Mattingly's work has shown how hoard coins, struck at common mints, travelled appreciable distances, of up to 150 miles across Britain (Mattingly 1963, 1964 and 1967b).
2. Examples are known to have crossed the Channel, as evidence by die-links (Lallemant and Thirion 1970), but the scale of such linking has not been assessed.
3. The chronology of the coinage has been established within fairly close limits, as follows. Some counterfeiting, in the form of casting, had been undertaken at earlier periods during the third century. Such counterfeiting continued into the early 270's, as evidenced at Whitchurch, but should not be confused with the main production of barbarous radiates, which were almost exclusively manufactured by striking. The striking of large module barbarous radiates began in Britain between 270-4. Smaller imitations were introduced from c. 275 and minims were current during the reign of Probus (276-82).
4. In Gaul, irregular antoniniani, which were close copies of regular issues, were being struck by 263 and were produced in quantity during the reign of Postumus (Giard 1963 and 1965).
5. The concept of a suppression of barbarous radiates between c. 282-4, under Carus and Carinus, has been suggested by prominent scholars; related to the implementation of Aurelian's coinage reform (Mattingly 1964; Boon 1967).
6. Circulation is considered to have continued until

approximately 286 (Mattingly 1964; Boon 1974).

7. The value of irregular antoniniani, of all sizes, is thought to have been equivalent to that of full sized regular examples. The minimi may have originally been silvered (Boon 1974).

8. The diminution in size over time is thought to have happened in step, across the whole of Britain (Mattingly 1971).

9. Mints are thought to have existed right across the province. Some may have been situated close to major sites, such as London, Colchester and Richborough (Mattingly 1967). Others took the form of illicit dens, and are associated with late minimi (Boon 1967 and 1972).

Not all of these views would find universal acceptance, However, they have been put forward in print and have contributed towards the general concensus of opinion. The piecemeal method of construction of the current knowledge will have become apparent during the course of this chapter. The lack of a major work of reference and the large bibliography, in English and in French, has complicated the study of barbarous radiates. It is hoped that this history of barbarous radiate research will help to clarify the situation at the start of this thesis.

The overall impression gained from this literature must be that the study has progressed about as far as is possible without recourse to new data. In this thesis a new source of data will be presented; that of site finds from the south of England. It was twenty years ago that H.B. Mattingly wrote,

'Only when a mass of local information has been sifted, appreciated, and correlated can we

expect to answer the baffling problems of this
coinage - its mints, its mechanics, its distribution
and its economic significance...' (Mattingly 1967).

This, then, is the objective. In the course of chapters 3-5,
some background to the period and to the regular coinage will
be presented, together with an explanation of the methods to be
used and a study of barbarous radiates die- and style-groups
already in print. The latter section will be organised to form
the basis for an eventual reference work for these coins.
Fresh data will be presented and analysed, from chapter 6
onwards. The study of new information against the established
framework presented in this chapter will allow consideration of
the wider questions, as outlined by Mattingly immediately
above, in the final chapters.

Chapter 3. The coinage copied

Introduction

An analysis of the regular coinage of the late-260's to mid-280's AD is an important precursor to a study of the irregular coinage; which was derived from it and circulated alongside it. In the first part of this chapter aspects of the regular coinage will be reviewed. The range of prototypes available for copying and their physical appearance will be described. The background of the official coinage must be understood before irregular coins can be separated from regular issues. In the second part of this chapter, the most useful methods of distinguishing the irregular types will be outlined.

I The regular coinage

A brief outline of the historical context of the period will be provided, showing the reasons for the themes employed on the coinage.

The historical outline

The chronological situation is summarised for clarity in figure 3:1. The time span shown is from the start of Gallienus' sole reign in 259 to the ^ausurpation of Carausius and the establishment of the British Empire in 287. During this period coin was not only being struck from many mints but also under two separate authorities; by the Central Empire and by the Gallic Empire. Attempts were made by Postumus and Victorinus to align their coinage with that of the former. The dating employed in this historical sketch is that of Drinkwater's 'refined' chronology (Drinkwater 1973 and 1974). The main historical events of the period were as follows.

In 259 the emperor Valerian was imprisoned by the Persians. His son, Gallienus, was left to rule the empire alone. In the same year Gallienus was called from Gaul to settle an uprising in the Danube province of Pannonia and while he was absent Postumus, his lieutenant, rebelled and seized control of a large part of the west. Postumus was initially supported by the provinces of Gaul, Britain, Spain and Germany, but Spain later returned its allegiance to Claudius II and Postumus abandoned part of Upper Germany and the *Agri Decumates*.

Gallienus and subsequent emperors were prevented from turning their full attention to the recapture of the breakaway Gallic Empire by a series of wars. Following the rebellion in Pannonia, Gallienus was faced with an invasion of northern Italy by the Alemanni. In 267-8 the Goths invaded the Balkans and the Aegean area. Gallienus attempted to regain control of the west in 265. He invaded Gaul but was badly wounded in the campaign and his army was forced to withdraw, conceding the loss. Gallienus was murdered in mid-268.

Claudius II was proclaimed emperor in succession. He was involved in campaigns against the Goths before succumbing to the plague in 270. He was succeeded by his brother Quintillus. Aurelian was proclaimed emperor later in the same year following the suicide of Quintillus. Aurelian was finally able to recapture the western provinces after restoring order elsewhere in the empire. He initially recognised the rule of Zenobia and Vabalathus, who had taken control of a large area in the east. In 272 he defeated the Goths on the Danube and then turned to the east, which he regained. He was then able to march on Gaul and received the abdication of the Tetrici in 274.

Postumus had achieved some degree of stability in the west

by defeating barbarians who had invaded Gaul. By 263-5 he had regained peace. In 268 Laelian, governor of Upper Germany, challenged Postumus and was defeated. A mutiny followed, resulting in the murder of Postumus and Marius was briefly elevated to the purple by his troops. Victorinus soon replaced him in the same year and was, in turn, murdered in 270. Following a brief period of interregnum Tetricus, a native of Gaul, became emperor and appointed his son Caesar of the Gallic Empire in 273. When Aurelian turned his attention to this area their opposing forces met in battle at Chalons-sur-Marne. The Tetrici were defeated and captured.

Drinkwater has rejected the traditional view of the Gallic Empire floundering progressively under successive emperors, following the initial success of Postumus (Drinkwater 1973). He has convincingly shown it to have been a stable, flourishing and successful entity. It remained Roman in form but possessed a strong Celtic identity and was run by native civilian landowners. It remained relatively peaceful.

The continuing barbarian incursions into Europe provided increasing trouble but were effectively kept in check by emperors after the demise of the Gallic Empire, and notably by Aurelian, who was murdered in Thrace in the year 275. An interregnum of about eight months ended with the election of the elderly Tacitus, by the Senate. He died in 276 and his brother Florian succeeded him, but was murdered in the same year. Probus acceded and enjoyed a relatively prolonged reign for the period, until 282. Probus spent his time campaigning, crushing rebellions by Saturninus in Egypt in 280 and by Bonosus in Gaul.

Probus was succeeded by Carus, who was to establish his sons

Carinus and Numerian as Caesars. In 282/3 Carus and Numerian travelled to the east to war with the Persians and invaders in Pannonia. Their campaigns were successful but both died in the east. Carinus, now Augustus, became emperor and was immediately challenged by Diocletian, in 284, the latter having been a senior officer under Numerian. Carinus was murdered in 285 and Diocletian acquired overall power. In an attempt to prevent his becoming overstretched he shared his power with Maximian, another military figure, in 285. They ruled half the empire each, as Augusti, with Maximian in the west and Diocletian in the east.

Carausius was Maximian's commander of the Channel fleet, operating between Britain and Gaul. He abused his position and took control of Britain and part of coastal Gaul in 287. It is at this point that the period under consideration comes to an end. The reign of Carausius saw the establishment of official mints in Britain for the first time.

There are important and contrasting themes dominating this period, which effected the coinage produced at the time. A larger number of emperors ruled for very short periods, in both the Gallic and Central Empires. The Central Empire was ruled by military figures and the military theme is reflected on the coinage. By way of a contrast, the Gallic Empire apparently remained more tranquil, although there were campaigns against barbarians under Postumus and Tetricus. The more peaceful theme was reflected on the coinage of the Gallic Empire.

The state of the currency

The Roman silver coinage was the subject of continuous debasement from the reign of Nero onwards. In the years before the third century there were successive debasements under

Vespasian, Domitian, Trajan, Antoninus Pius, Marcus Aurelius and Commodus. The weight and fineness of the coinage continued to undergo modification under Caracalla, in 212 and 215, and under Elagabalus in 218. By the year 220 the denarius contained less than 50% silver. Sestertii became smaller and the traditional bronze denominations of the Augustan coinage system were rare after the mid-third century.

Caracalla introduced the new silver coin known as the antoninianus, which is thought to have been originally tariffed as a double denarius. Its outward appearance in AD 217 was bright silver, when it was about 50% fine. Further currency debasements continued under Balbinus and Pupienus in 238 and between the years 249-53, from Trajan Decius to Aemilian. The denarius became rare after Gordian III, leaving the antoninianus as the standard silver coin type in circulation. Under Trajan Decius it is sometimes found overstruck on earlier denarii (Carson 1980, 89).

A study of the antoninianus alone reflects the spiralling problems of the third century economy, with its deteriorating weight, outward appearance and fineness. Under Trajan Decius the fineness was approximately 40%. By 266 it had slipped to 5%. By 270 it had been reduced to a copper coin with approximately 1% silver. The processes by which these changes in the silver content took place have been documented by Walker (1976, 1977 and 1978) and by Cope (1967, 1969 and 1972). The result was an increased number of debased silver coins in circulation. The Western Empire became flooded with antoniniani, of very low intrinsic value, during the third quarter of the third century. The coinage of the specific years under consideration will now be reviewed.

Introduction to the coinage

The adhesion of Britain to the Gallic Empire and its more distant geographical position in relation to the mints of the Central Empire meant that Gallic Empire coinage circulated predominantly throughout. Nevertheless, Central Empire coinage for these years is found in Britain. Its use increased the range of prototypes available for copying at the irregular mints.

The emperors who struck coin during these years can be summarised.

CENTRAL EMPIRE	GALLIC EMPIRE
259-68 Gallienus (Salonina)	259-68 Postumus
268-70 Claudius II	268 Laelian and Marius
270 Quintillus	268-70 Victorinus
270-5 Aurelian (Severina)	270-4 Tetricus I and II
275-6 Tacitus	
276 Florian	
276-82 Probus	
282-3 Carus	
283-4 Numerian	
283-5 Carinus	

The coinage of some emperors is common and that of others is scarce. These questions will be considered elsewhere.

There are currently many problems surrounding the official coinage of this period, particularly in the case of the Gallic Empire. The relevant volume of Mattingly and Sydenham's Roman Imperial Coinage is, despite its length (two volumes), no longer adequate as the standard reference work. P.H. Webb compiled these volumes, first published in 1927, since when

there has been significant progress. The volume in question is currently under revision (Sutherland and Carson 1981).

For the coinage of the Central Empire, R.I.C. V is still the standard reference (Webb 1927). There are areas where this work is particularly dated, in particular in the case of the coinage of Carausius and Allectus. Elsewhere, large numbers of issues, especially under Gallienus, remain undated. Problems still surround the profuse Consecratio issues, struck under Quintillus and Aurelian, and a proper catalogue of their types badly needs compilation.

Large numbers of very poor antoniniani were emitted under Gallienus and Claudius II and are frequently confused with irregular issues. Traits such as off-centre striking, irregular die-axes and blurred engraving are common. A trained eye, or a consistent opinion, is essential before relative numbers of regular and irregular coins can be compared from different collections. If collections have been sorted by different people such comparison may be erroneous. The reason behind the large numbers of poor coin produced at the regular mints, especially during the last years of Gallienus' reign, is not fully understood at present. It may have been a result of commitments to reach pre-set production requirements.

R.I.C. volume V needs serious revision in other areas also, notably the British Empire section, but this falls outside the scope of the present study. Webb's catalogue still remains the standard reference for the regular coinage of the Central Empire.

For the coinage of the Gallic Empire, Webb's catalogue is badly out of date. Fortunately, a preferable reference work is available. In 1940, the German scholar G.Elmer published his

now classic scheme (Elmer 1941). This admirable study met with immediate approval, as soon as it became accessible to British scholars, after the Second World War (H. Mattingly 1946).

The dearth of literary and epigraphic evidence associated with Gallic Empire mint location meant that Elmer had to use alternative information. He employed a combination of historical research and stylistic study of the coins. Fortunately it was possible to establish a chronology for the Gallic Empire based upon the tribunician and consular powers held by emperors and a stylistic study of the coins was integrated into this framework. Minor stylistic variations were taken to indicate different issues or officinae and major stylistic differences were considered to separate the products of different mints. The practice employed by the Gallic Empire mints of gradually simplifying obverse legends over the years assisted this work.

Postumus' coinage can convincingly be associated with the mint city of Cologne, by reverse legends which include the abbreviation COL CL AGRIP (Colonia Claudia Ara Agrippinensium). The location of this mint at Cologne is also most likely on historical grounds. Stylistic study shows a continuation of the use of this mint throughout the Gallic Empire, striking subsequently for Marius, Victorianus and the Tetrici. It also then struck for Aurelian, following his victory over the Tetrici. At the end of Postumus' reign his coinage was also, briefly, struck from Milan (Alfoldi 1927).

Controversy has always surrounded the situation of a second Gallic mint at this time. Laelian's coin clearly did not come from Cologne, which was under the control of Postumus. Webb considered this second mint to have begun at Mainz, then to have been transferred to Lugdunum (Webb 1927). Elmer

considered that similarities with Cologne indicated that a second mint was an offshoot of the former mint, which was initially captured by Laelian. The second mint was then continued by Marius, Victorinus, the Tetrici and Aurelian. Elmer located this second mint at Trier. Elmer's scheme is now generally accepted. Elmer's untimely wartime death prevented any subsequent revision of his basic scheme. Various amendments have been discussed (Le Gentilhomme 1942; Lallemand and Thirion 1970; Bland 1979 and 1982) but Elmer's scheme still forms the most satisfactory basis for classifying Gallic Empire coinage.

The coinages of these emperors will now be reviewed. The physical appearance of the coins and the themes employed on the reverses will be considered in order to show the range of coinage available, for contrast with the irregular issues described in later chapters.

AD	CENTRAL EMP	GALLIC EMP
259	Gallienus sole	Postumus
268	Claudius II	Laelian/Marius
270	Quintillus	Victorinus
274	Aurelian	Tetricus I and II
275	Tacitus	
276	Florian	
	Probus	
282	Carus	
284	Carinus	
287	Diocletian	BRITISH EMP Carausius

Fig.3:1 The chronology of the period

A. Rulers of The Gallic Empire

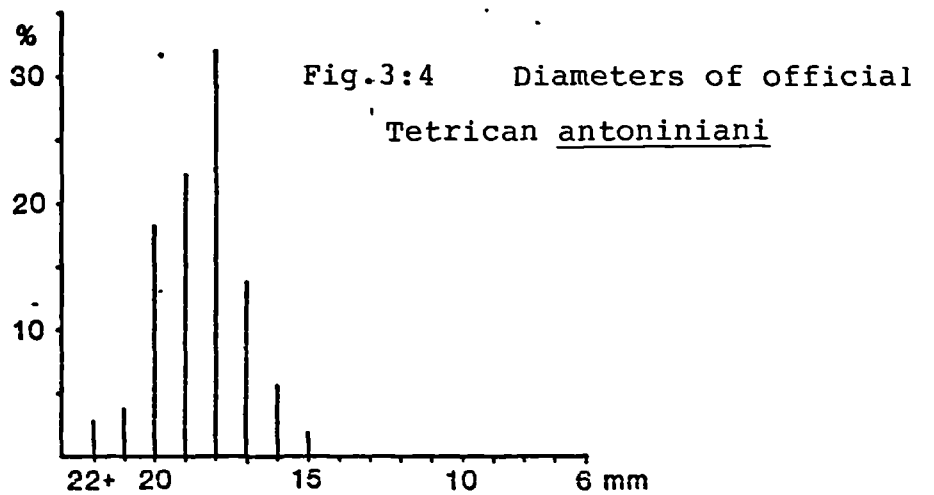
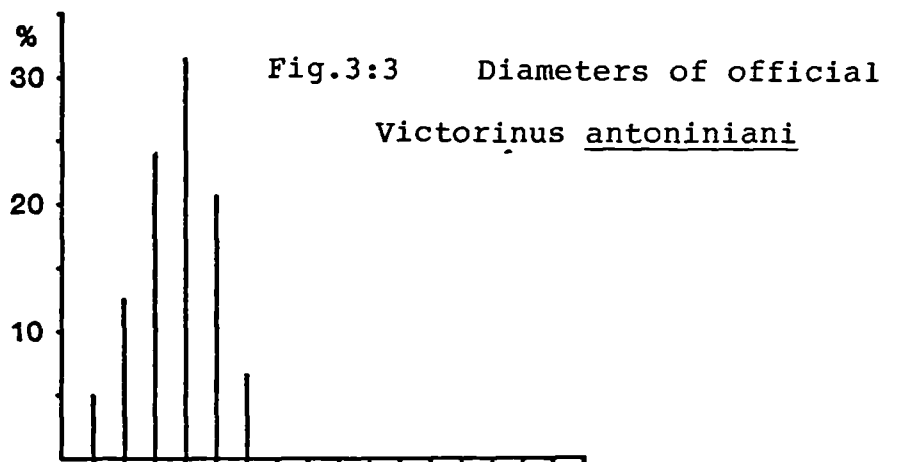
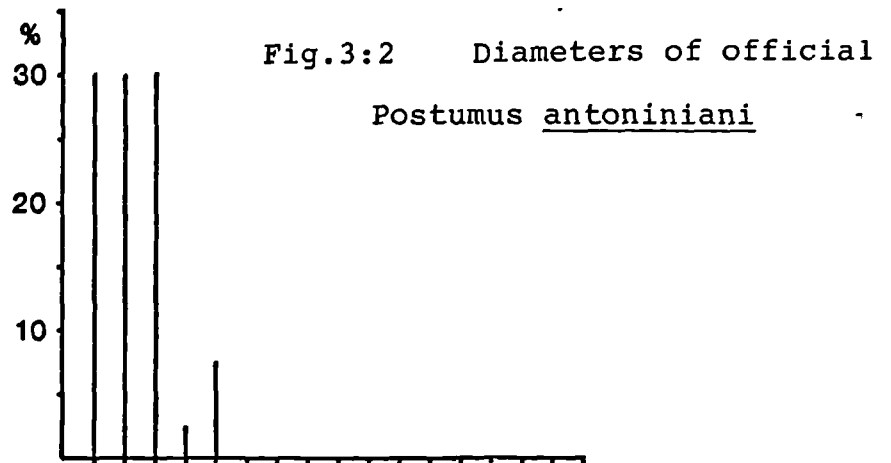
Postumus

The R.I.C. volume V lists Postumus' mints as Lugdunum, Cologne and Mediolanum (Webb 1927). Elmer ascribed all of his coinage to Cologne, except for a brief issue at Mediolanum, which was not of his instigation (Elmer 1941). Elmer sorted this coinage into 26 issues from Cologne and five from Mediolanum.

The coinage. It was the antoniniani which were issued in greatest numbers and which are relevant to the current study, being the denomination copied. The antoniniani of Postumus were silver in appearance and their module was larger than under subsequent Gallic Emperors. A sample of forty regular antoniniani from the Silchester collection have been measured and their diameters are recorded in figure 3:2. 90% show diameters of 20 mm and above. A similar result was recorded by measuring examples from the trays of the Heberden Coin Room, Oxford. of 32 examples measured, 28 (88%) were 20 mm or above.

The quality of coin engraving on Postumus' antoniniani was generally high. The engraving on the aurei was exceptionally high, as it was in the case of all Gallic Empire gold coinage. The obverse representation of Postumus is readily recognisable, alongside the other Gallic Emperors. His features are often described as rounded and benign.

Reverse types. The reverse types employed clearly convey a theme of strength. There are two major categories of reverse; military and religious. Military figures were given prominence in many diverse issues, with legends such as SALVS EXERCIT, VIRTVS AVG, VICTORIA AVG and FIDES EXERCITVS. The theme of



frontier defence was a slight variation, with VICTORIA GERMANICA, RESTITVTOR GALLIAR. and SALVS PROVINCIARVM, the latter associated with the figure of the Rhine god.

Strength is emphasised among the religious types too. Jupiter (IOVI STATORI and IOVI VICTORI) and the favourite Hercules (HERC PACIFERO, HERCVLI AVG and HERC DEVSONIENSI) were well featured. Postumus also honoured Apollo, Diana, Jupiter, Mars, Mercury, Minerva, Neptune, Sol and even Serapis, among his religious series.

These types create the impression of a strong rule and safe frontiers. PAX AVG and CONCORD AEQVIT were also featured. In addition, a successful reign is alluded to with the use of the Fertilitas figure (VBERITAS AVG) and MONETA AVG. Postumus commonly employed both figurative and non-figurative reverse types. Examples of the latter include SAECVLI FRVGIFERO (winged caduceus), FIDES EXERCITVS (four military standards), LAETITIA AVG (Galley prow) and HERC DEVSONIENSI (temple).

Laelian and Marius

The brevity of these reigns was such that very little coin was produced. It is rarely found on sites in Britain and would not have had any appreciable influence upon irregular moneyers. Portraits and types were very similar to those of Postumus and Victorinus.

Webb allocated Laelian's coinage to Mainz (Webb 1927) but Elmer listed it as from Trier (Elmer 1941). Elmer cites just three issues, all with the reverse VICTORIA AVG. Webb assigned Marius' coinage to two mints; Cologne and an 'unidentifiable mint'. Elmer agree with Cologne, but cited the second as Trier and listed two and six issues respectively.

Victorinus

Webb catalogued Victorinus' coinage under the mints of Cologne, a 'southern mint' and an 'unattributed mint' (Webb 1927). Cologne has been considered to follow on from Postumus' coinage because of similarities of lettering and style. Webb considered that a different style was used on about half of Victorinus' coins and discussed possible locations for a second mint, rejecting Lugdunum (on stylistic grounds) and considered other Gallic sites such as Vienne. Elmer placed this mint at Trier, following on from Marius (Elmer 1941). Mattingly was concerned that there was insufficient evidence for a specific location (Mattingly 1946) but Trier has since won general approval. Elmer has listed eight issues of antoniniani at Cologne and ten at Trier.

The aspect of continuity at the Gallic Empire mints can be well illustrated. The earliest issues at Trier issued under Victorinus bear portraits of Marius, his predecessor. At the end of the reign, the initial issues struck under Tetricus at Trier were DIVO VICTORINO PIO commemoratives.

The coinage. A decline in the module of the antoninianus, to accompany the decline in metallic standard, is shown in figure 3:3. Once again, the figures come from an examination of Silchester coins. They contrast with those for Postumus, in figure 3:2. A greater variation in size is noted. Webb also noted a similar variation in the weight of Victorinus' antoninianus (Webb 1927). Of the 121 coins measured from Silchester (originating from both mints), 59% fall below 20 mm diameter and fall as low as 17 mm.

The characteristic features of Victorinus' portrait are his hooked nose and pointed beard, which are accentuated more on

some issues than others. The initial issues struck at Trier, which carry a likeness of Marius, were struck before a correct likeness of the new emperor was available to work from. Subsequent issues show a degree of variation in portraiture, between a more muscular, robust type (Elmer 651) and a variety with thinner features (Elmer 754). His diagnostic features are not ascertainable at all on others (Elmer 649) and copies of such types could easily be mistaken for portraits of Tetricus I. Lettering was initially very fine. Left-facing busts were sometimes employed at Trier (Elmer 733/4/5, 742, 738).

Reverse types. There was a much more restricted range of reverse types used on the antoniniani of Victorinus than used by Postumus. There was a greater degree of originality in the range of aureii, which were also very well engraved. The aureii show a military theme, notably with the legionary series, honouring 13 legions. The military theme followed through to the antoniniani, with FIDES MILITVM, VIRTVS AVG, MARS VICTOR and VICTORIA AVG. Religious types are less diverse than under Postumus. Diana and Mars were commemorated but the emphasis was reserved for Sol, who was accompanied by the legend INVICTVS. PAX AVG was a popular theme. The quality of workmanship on the antoniniani was less strong than under Postumus.

The range of types available for copying was becoming more restricted. There were no non-figurative types produced under Victorinus. Types were predominantly static female poses, with only occasionally more animated figures, such as Sol and Mars.

The Tetrici

Webb allocated all Tetrican coinage to the 'southern mint', on stylistic grounds, although some coins were seen to have lettering akin to that employed at Cologne (Webb 1927). He saw insufficient evidence for a division into two mints. Elmer recognised continuity from the issues of Victorinus, at both Cologne and Trier (Elmer 1941). Bland has reduced the number of issues at Cologne from Elmer's seven to five and at Trier to eight (Bland 1979).

The coinage. The problem of distinguishing regular from irregular issues is more acute for the Tetrici. The number of their coins found on sites is greater and the quality of the regular coinage had deteriorated still further. The comparative sizes of regular Tetrican antoniniani are shown in figure 3:4, compiled from a sample of 181 coins from Silchester. The range of their diameter is even greater than under Victorinus and the average diameter has dropped to approximately 18 mm. 75% of the examples measured fell below 20 mm, and dropped to 15 mm (see figure 3:4 for the complete range).

Cohen published coins of Tetricus II with AV or AVG on the obverse but these were omitted by Webb (Cohen 1880-92; Webb 1927). Regarding portrait engravings, Tetricus I's features were ordinary, lacking real distinction. His nose and beard were straight. He was occasionally portrayed as older looking, or fuller in the face (Elmer 772) or younger and thinner in the face (Elmer 789). Tetricus II can be easily distinguished by his lack of beard. One issue of his carries a left-facing bust (Elmer 793).

The silvered appearance of antoniniani of Postumus and,

sometimes, Victorinus is not seen on those of the Tetrici. Flans were also more irregular in shape.

Reverse types. The range of reverse types employed was similar to that found under Victorinus and remained uninspired and unexciting. There was less military emphasis and less religious adherence than under Postumus. Types were mainly static female figures; with Spes, Victoria, Concordia, Comes, Pax, Fides, Laetitia, Hilaritas and Salus. Male types were far less common, with just Virtus and Mars. Types peculiar to Tetricus II were PRINC IVVENT (Elmer 781), NOBILITAS AVGG (Elmer 795) and PIETAS AVGG/AVGVSTOR (Elmer 773, 777, 778). The latter type, depicting sacrificial implements, was the only non-figurative reverse used by the Tetrici.

The official coinages of the Tetrici and Victorinus share many similarities. As site finds, neither type tends to possess any surface silvering. They share a similar size range, dropping below that of Postumus in both cases. Flans tend to be irregular in shape. Portraiture is not dissimilar between Tetricus I and Victorinus and the range of reverse types employed, based on the static female figure, is very similar. Poor imitations of these antoniniani are therefore often very difficult to distinguish between one or the other set of prototypes. Unless remnants of a legend are present there may be no way of separating the two, unless Victorinus' distinctive features have been clearly represented.

There are some reverse types used by Victorinus and not by the Tetrici, and vice versa. If these types are identifiable on an imitation, the coin can be assigned to the relevant emperor. These types can be listed.

Reverses used by Victorinus and not the Tetrici.

AEQUITAS AVG	PIETAS AVG	PAX AVG (with transverse sceptre)
INVICTVS	VIRTUS AVG (Virtus right)	

Reverses used by the Tetrici and not by Victorinus

SPES AVG(G)/PVBLICA	PIETAS AVGG/AVGVSTOR (sacrificial implements)
PAX AVG (with vertical sceptre)	PRINC IVVENT
LAETITIA AVGG/AVG N	HILARITAS AVGG NOBILITAS AVGG

B. Rulers of the Central Empire

Gallienus

Gallienus' reign was preoccupied with securing the imperial frontiers and his policies were designed to cement the allegiance of the armies to the emperor. He founded mints in locations associated with large concentrations of frontier troops, in an attempt to regularise military pay (De Blois 1976). The location of his mints can be associated with frontier events during the reign. De Blois has listed the mints in chronological order of their foundation, as follows.

AD 257 Viminacium was moved to Cologne for the benefit of the Rhine army.

AD 258-9 Milan was founded for the benefit of troops fighting the Alemanni.

AD 262 Siscia was established for armies fighting in Pannonia.

AD 267 Smyrna/Cyzicus/Ephesus was established for the armies fighting the Goths, in the Aegean and the Balkans.

There was also possibly Sirmium, for the coin supply of Gallienus' own troops (Gobl 1953).

Another mint was located in Asia, possibly at Antioch, and a further eastern mint has been suggested (Robertson 1978). Rome was the principal mint throughout, striking in all metals, and in greater quantity than the others.

The decentralisation of mints under Gallienus had a number of effects upon the financial stability of the empire. The standardisation of coin issues became more difficult. The overall result was a lack of uniformity and a diverse range of physical appearance. More coin was being produced from more mints, as the size of individual issues was also increased. The effect on the economy was inflation.

Philip Tyler has argued that different alloy standards

applied to antoniniani struck in different parts of the empire, under Gallienus (Tyler 1975). He concluded that 'the differences in both silver content and striking weights are too marked and too closely related to political events to be haphazard'. He envisaged a currency system, 'in which the antoninianus...varied in intrinsic worth, though not probably in face value, in different parts of the empire' (Tyler 1975). Antoniniani of Gallienus, struck at different mints, can vary profoundly in physical appearance, ranging from silver to bronze. Antoniniani struck in Rome and intended for circulation in the east were struck with a similar silver content to issues struck at Antioch. At this time, Rome manufactured issues of antoniniani at different alloy standards, intended for circulation in different provinces, simultaneously (Tyler 1975).

The coinage of Gallienus' sole reign was characterised by the introduction of a new, short, obverse legend GALLIENVS AVG, by about 261 (Robertson 1978). The coinage from Rome was issued in three main phases, from six, then nine, then twelve officinae. The output of antoniniani increased three-fold between the start of the reign and 265-6 and the rate of production in each officina doubled during the period 265-6 (Tyler 1975).

Gallienus struck coin for his wife, Salonina, starting in 253 and continuing until the end of the reign. Coin was also struck for his sons Valerian II and Saloninus.

The physical appearance of Gallienus' antoniniani offered a range of types which differed widely in style and in quality of engraving, as well as in intrinsic value. Examples of Gallienus' regular issues found at Silchester have been

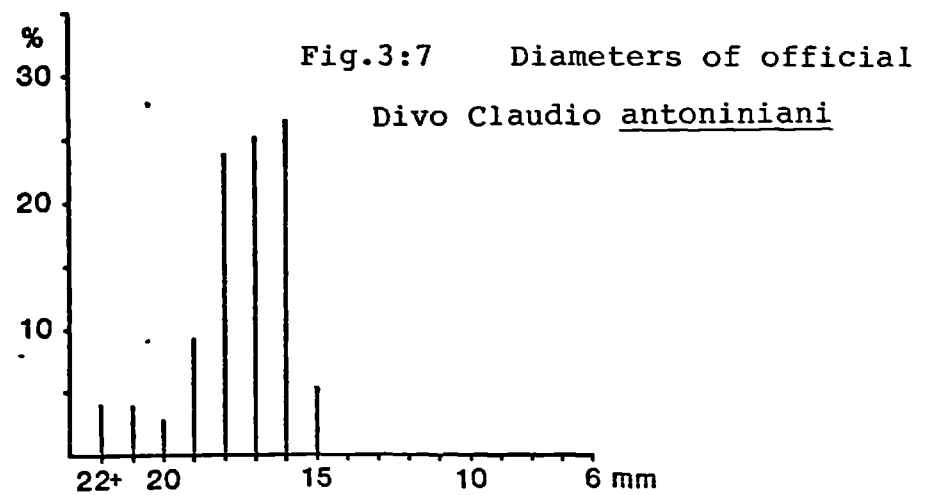
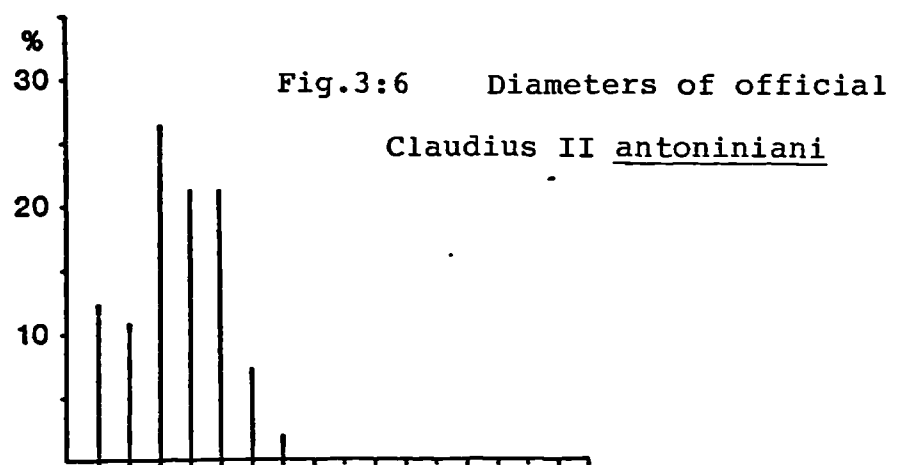
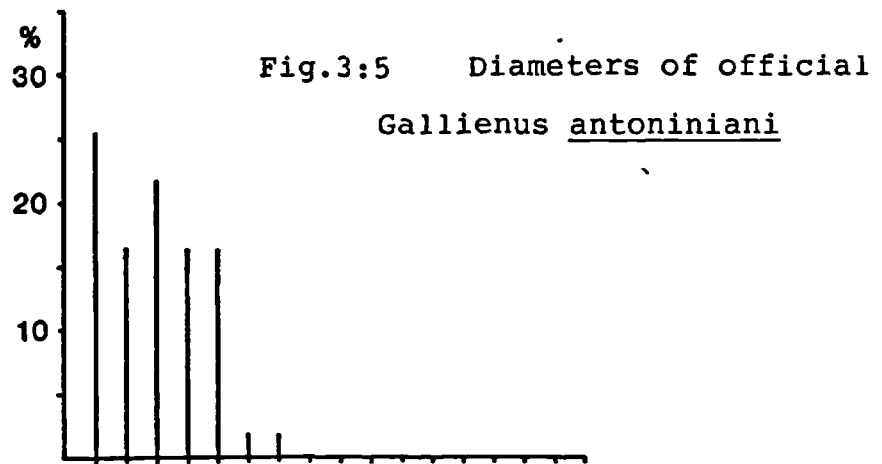
measured and recorded in figure 3:5, for comparison with the Gallic Empire coin sizes (figures 3:2-4). The variability of size is apparent. 25% of examples measured 22 mm or over but others fell as low as 16 mm.

Gallienus' antoniniani were highly variable in all aspects of their appearance and in their intrinsic value. The latest issues were frequently very poorly struck. It is for these reasons that the dividing line between regular and irregular coins of Gallienus is particularly difficult to judge.

Reverse types. The military events which dominated Gallienus' reign are reflected in the themes employed within the coinage. Special legionary and cohort series were struck at western mints. These attractive issues of antoniniani employed a range of engravings depicting both real and legendary animals, including a capricorn, boar, hippocamp, lion, bull, stork and centaur. Of the 189 issues of antoniniani from the mint of Rome, 42 employed either Virtus or Victoria themes, emphasising the military mood. Mars was also used.

Jupiter predominated among religious types. A particular late series, devoted to deities, employed animal reverses, associated with legends such as APOLLINI CONS AVG and DIANAE CONS AVG. These animal issues were minted in large numbers and were attractive for copying. They employed a griffin, stag, doe, centaur, panther, goat, lion, antelope, hippocamp and capricorn.

The change of obverse legend which commenced with the sole reign was accompanied by a change of portraiture. The emperor's neck became elongated and his head was depicted as being very square, with a bubbly beard, which comprised tiny dots and extended to the neck, beneath the chin. Salonina's



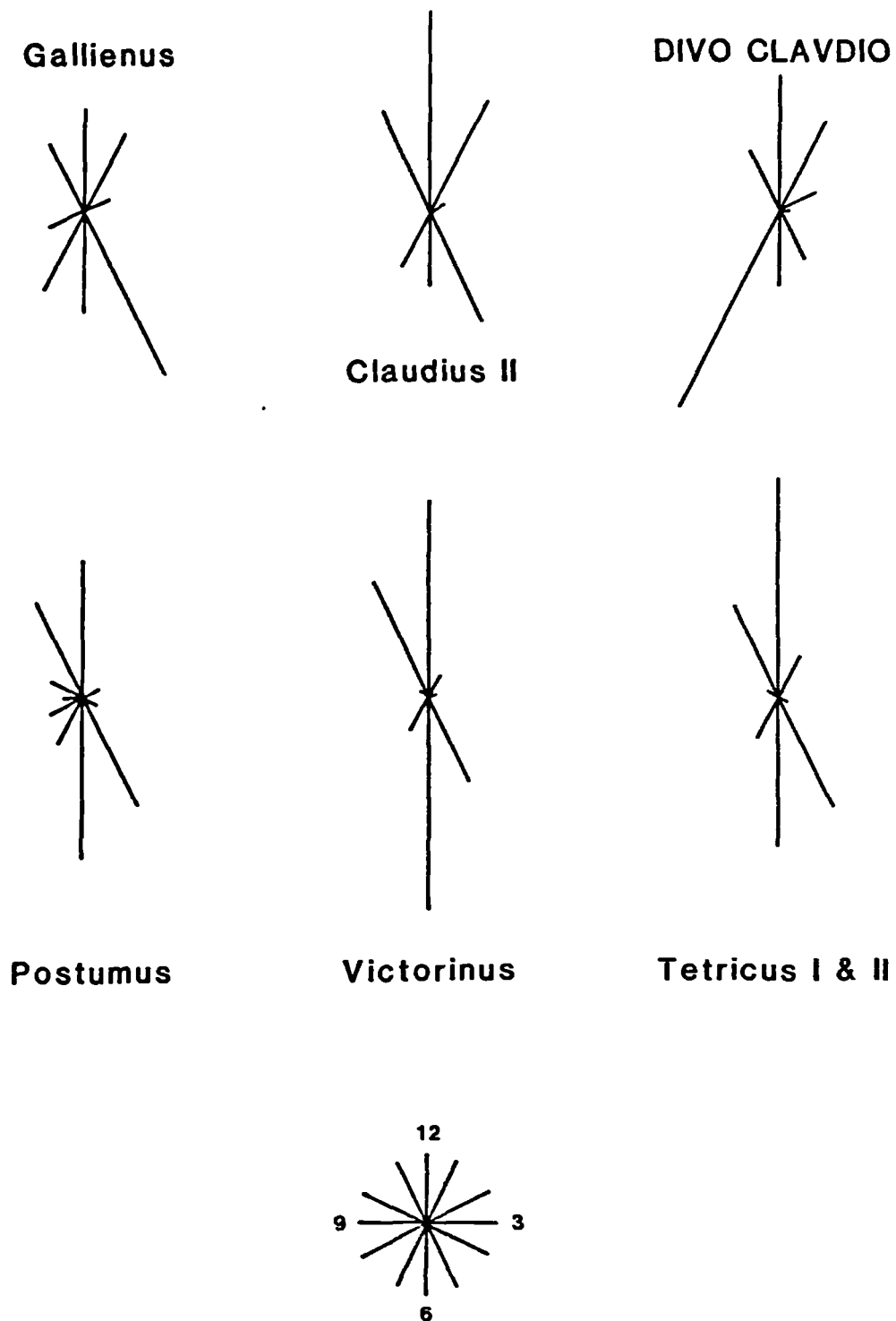


Fig.3:8 Die-axes of regular antoniniani in the Silchester collection. Lengths of lines are proportional to the number of coins with that die axis

portrait employed a draped bust, facing right, wearing hair in horizontal ridges and with a plait running up the back of the head.

Claudius II

Rome continued to be the principal mint, under Claudius II. Output from Rome continued to increase, under Claudius and Quintillus, doubling during the years 269-70 (Tyler 1975). Six, and later twelve, officinae were employed, and were distinguished by the letters A-N and X-XII. Other mints employed were possibly Siscia, Antioch, Ephesus and Cyzicus. Each mint used different officina marks (Robertson 1978). Another eastern mint may also have been employed for a series of antoniniani which lacked any officina mark.

The fineness of the antoninianus reached a nadir at the end of this reign (Cope 1969). The physical appearance of the coinage is also variable. Fifty-seven Claudian antoniniani from Silchester were measured and the results have been recorded in figure 3:6. Diameters are variable but are distinctly smaller than those of Gallienus (figure 3:5). The majority fall below 20 cm diameter.

The coinage. Claudius' portrait was highly distinctive and can be readily identified on imitations. The characteristics were a square-shaped jaw, with neat beard. The nose was pointed and forehead covered by a wedge-shaped mop of hair. The portrait style did vary markedly at eastern mints.

The military theme of Gallienus' reign continued on the coinage of Claudius II. Such types include Virtus, Victoria and Fides Militum.

The Divo Claudio, Consecratio, coinage

This commemorative series of antoniniani, inscribed with the legends DIVO CLAVDIO (obverse) and CONSECRATIO (reverse) was issued immediately following the death of Claudius II. The two main reverse types were an altar and an eagle. R.I.C. V is still the standard reference for these coins but the range of engraving variations requires a more detailed arrangement, especially for the altar. The eagle variant tends to occur less frequently than the altar. A third variant, the funeral pyre, is much less common. These coins were issued from all mints. Some carry mint marks and the engraving styles can also distinguish the products of particular mints.

A full study of the range of regular varieties is desirable before the irregular coins can confidently be separated. This would be an enormous task in itself and requires work beyond the scope of this thesis. However, these coins were one of the most regularly copied series and they do, as such, require some attention.

The altar reverse carries more variation than the eagle. The range of regular variants is described below and illustrated in figure 3:9. Type A is an altar divided into four segments, with a fire on top.

A1 has a dot in each segment.

A2 has no dots.

A3 has a wide border.

A4 has the altar 'waisted'.

Type B is a square altar, with a handle, and a fire on top.

B1 has a dot above the handle.

B2 has no dot.

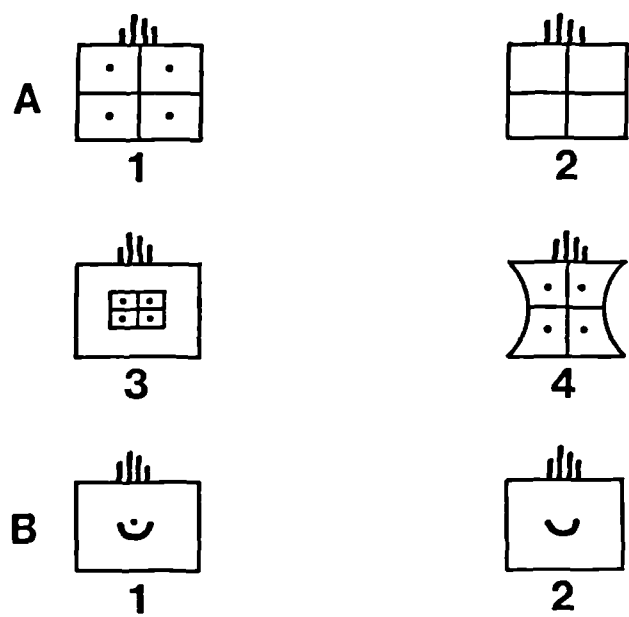


Fig.3:9 Consecratio, altar; reverse types

The eagle type is more difficult to sort into sub-types. They are found with 'head right' and 'head left', although the latter are less common. The eagle may be crouched or vertical but, beyond this, further sub-division may prove more misleading than useful.

It is not possible to cite precisely when these posthumous coins were struck. They have been generally assigned to the reigns of Quintillus and Aurelian but no terminal date has been agreed. The brevity of Quintillus' reign was such that this series could have been initiated as late as Aurelian (Cope 1969) although this is not generally thought likely. Cope has in fact shown similarity between the metallic properties of this coinage and that of Quintillus (Cope 1969). Bland has postulated that the altar reverse may have been produced by Quintillus and the eagle by Aurelian (Bland 1982). This idea was born from the discovery of examples of pairing between the obverse of Aurelian's first issue at Rome and the CONSECRATIO, eagle reverse. Just four examples of this type are known (Roger Bland, pers.comm.). However, we have, as yet, no known examples of Quintillus combined with an altar reverse.

It appears that regular CONSECRATIO issues should bear similarities in their metrology to the coinage of Quintillus and Aurelian's pre-reform antoniniani. In consequence, CONSECRATIO coins which vary from them to any appreciable extent are likely to be irregular.

Antoniniani of Quintillus vary widely in weight, falling below 2.0g and reaching above 4.0g, but their main range is between about 2.4g and 3.8g. These figures, and those cited below, have been obtained by personal inspection of collections in Reading Museum, the Ashmolean Museum and the British Museum. Aurelian's pre-reform antoniniani also range widely, between

about 2.5g and 4.5g, but lie mainly within the range of 3.0g to 4.0g, with a higher average weight than the coins of Quintillus. It would be expected that irregular coins would range around and below the minimum regular weight.

The regular antoniniani range from about 19 mm to about 23 mm in diameter. Pre-reform antoniniani of Aurelian range from about 19 mm to about 25 mm. Of course, vigorous circulation would affect the size. With regard to die-axis, these coinages stuck closely to an 0 or 180 alignment (Robertson 1978). When a die-axis is otherwise, the coin is a candidate for closer inspection.

The irregular DIVO CLAVDIO coinage was almost completely lacking in silver and normally contained high proportions of lead (Cope 1969). It is not possible to apply this sort of analysis when studying an ordinary site collection. The criteria of style, die-axis, size and quality of lettering have to be used and the acquisition of experience is the most important tool available.

In conclusion, the following criteria can isolate irregular CONSECRATIO coins. When the die-axis strays from 0 or 180 degrees suspicion should be aroused. The general size and weight range of official coins has been outlined above and in figure 3:10. Variation from this would increase the likelihood that a coin is irregular. Gaps between letters and unusual engraving styles are a most reliable guide also. Problems can arise when the flan size drops to about 18 mm. Close examination shows that size alone is not a reliable criterion. Presence of surface silvering will often suggest that a coin is regular. Irregular examples do not generally carry silvering. Problems can be magnified when a site collection, as opposed to

a hoard, is studied. Wear and corrosion reduce size, weight and surface relief. A trained eye is important in such cases. Figure 13:10 shows the size and weight range recorded from regular examples recovered from the site of Silchester.

Very infrequently hybrids of this series are encountered. 'Lifetime' obverses of Claudius II may be combined with the eagle reverse or 'lifetime' reverses can be combined with the DIVO CLAUDIO obverse. Examples of the latter type have been recorded at Silchester (Boon 1954).

Quintillus

The brief reign of Quintillus lasted from March to August(?) of 270. His coinage was struck in quantity from the twelve officinae at Rome and he continued to employ the same types as his brother. Other mints used were possibly Milan, Siscia and Ephesus or Cyzicus. These mints still need verification. The coinage of Quintillus is not as commonly found on sites as that of Claudius and consequently was copied less frequently.

Copies of Quintillus can easily be mistaken for those of Claudius. The portrait was identical, although the hair and beard was sometimes represented by dots, indicating curly hair, which was not used for Claudius.

Other Emperors

The coinage of subsequent emperors of the Central Empire was not regularly copied. Occasionally later types can be found and so some mention will be made of the relevant emperors.

Aurelian

The first issues of Aurelian resembled those of his immediate predecessors in terms of fabric, weight and fineness. His

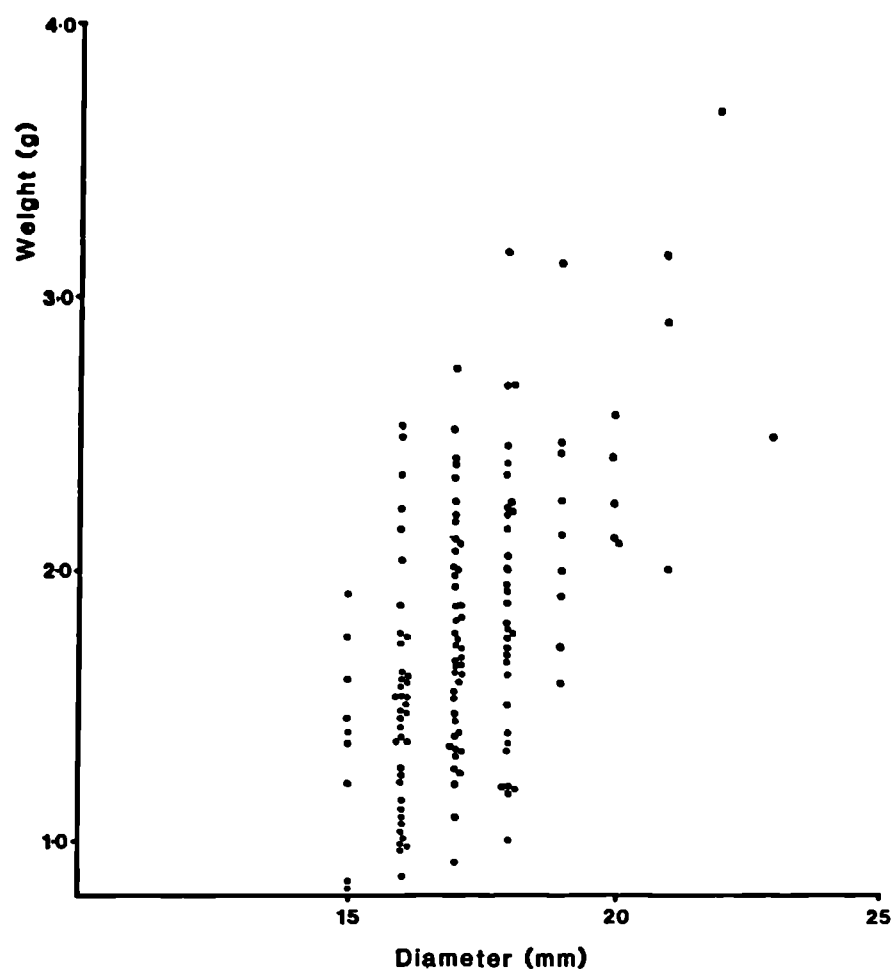


Fig.3:10 Weights of official Divo Claudio issues

portrait also resembles that of Claudius, with square jaw and angular nose. The reverse types employed were initially a continuation of previously used military themes, repeating the types used by Quintillus (Carson 1965).

At mints other than Rome, including Milan, Siscia and Cyzicus, the initially poor coinage was replaced by types better in style and fabric, with better module and weight. This improved phase is not detectable within the coinage issued from Rome. A reform of the coinage was then undertaken at all mints and it is characterised by the use of the Roman numerals XXI or the Greek numerals KA, on the new antoniniani. The date of this coin reform was 274 (Carson 1965).

The mints used by Aurelian were Rome, Cologne (which was succeeded by probably Trier and then by Lyons), Milan (replaced by Ticinum after the reform), Siscia, Serdica, Cyzicus, Antioch and Tripolis.

The coinage. Aurelian, another distinguished general, again favoured military themes. Types include Mars, Victoria, Concordia Militum, Oriens Aug (Sol with captive) and Virtus. His victories over the Goths, Germans and Parthians were commemorated. Jupiter was honoured, as Conservator but was replaced by Sol later on. Later issues commemorated the restoration of peace in the east. Coin was struck for Aurelian's wife Severina, in the final stage of the reform. Her portrait and hair style, with plait up the back of the head, was very similar to that of Salonina and copies of either would be difficult to distinguish.

The pre-reform antoniniani had shown a decreasing variety of new types, a sameness of portraiture and little variation from reign to reign. The reform coinage now presented types

with differences. There was improved fineness and the use of the numerals XXI and KA. New reverses used included two-figure types, such as CONCORDIA AVG, and three-figure types, using one dominant and two subsidiary figures, as in ORIENS AVG (RIC 151), where Sol stands centrally, over two captives. Other interesting types include Mars walking right, with diagonal spear and trophy over his shoulder. A female figure seated is very unusual, as in FORTVNA REDVX. Aurelian's cuirassed bust and small head were very distinctive features.

Tacitus and Florian

The short reign of Tacitus and Florian meant that their coinage was not influential on the production of irregular coin in Britain. Their coin is very rare in Britain and is not considered here.

Probus

The coinage of Probus again saw the introduction of more varied reverses and a wide range of obverse legends and imperial busts. His main mint was Rome, where the antoniniani came from seven officinae, indicated by the letters A-Z. Other mints used were in Gaul (probably Lyons), Ticinum, Siscia, Serdica, Cyzicus, Antioch and Tripolis.

Some of the more unusual types, by contrast with preceding reigns, were the temple reverse, as in RIC 186 (ROMAE AETER). Two-figure reverses were again used. A mounted figure (the emperor) was employed and Sol was depicted riding in a chariot. The seated female figure was used.

As with Aurelian, the head of Probus is depicted as small and his bust is strongly armoured and cuirassed. Left-facing

busts had been used prior to Probus' reign but it was under this emperor that they were to become commonly employed. In general, the increased variety of types and the new range of mint marks meant that imitations of Probus' coinage are likely to carry some distinctive features, distinct from coinages of previous emperors.

The period from the death of Probus to Carausius

The coinage struck in the mints of the Central Empire after the death of Probus is comparatively rare in Britain. The scarcity of coins of Carus, Carinus and Numerian can clearly be seen in coin lists from British sites (Reece 1972, table 3).

Antoniniani of Carus and his sons were neat, well-engraved coins, comparable in appearance to those of Probus. At some mints Carus was portrayed as balding, with a Roman nose. Otherwise, his features would be very similar to those of Probus. Carinus and Numerian were shown as being younger, though with similar draped and cuirassed busts.

The appearance of Carausian coinage in AD 286 marks a distinct change in the official coin circulating in Britain. Coin was again being introduced into circulation in quantity. Also, the physical appearance of the coinage was markedly different. The antoniniani were larger than previous antoniniani and very distinctively engraved. These coins were not imitated widely and provide a distinct break from the coin previously in circulation.

Local coinages

The emphasis of this survey of the official coinage has been concerned with the coin found in Britain. Barbarous radiates were also found in other parts of the Roman Empire and the local conditions which gave rise to the use of irregular coin elsewhere will be considered in chapter 14. It is therefore applicable at this stage, during the description of regular coinages, to mention the locations of city mints which were authorised to strike their own coin. These cities were situated in the Hellenistic east. They had traditionally been allowed to strike coin for the duration of the Roman Empire.

In the period following Valerian's capture, in 259, Rome's control of the east slackened and it was in these years that most local mints closed (Callu 1969). Greek imperial issues struck for Gallienus were profuse but it appears that most were in fact coined during his joint reign with Valerian (Sear 1982). Under the joint reign over a hundred local mints produced their own coinage but by the reign of Claudius II there were just six left; five in Pisidia and one in Cyzicus (De Blois 1976). Alexandria continued to coin and flourished during Gallienus' sole reign. Greek imperials were also struck for Salonina, Valerian II and Salonⁿius, but the short reign of Quintillus meant that his issues were only struck from Alexandria.

Despite his recovery of the east, Aurelian did not restore the privilege of striking coin to these cities. Only a few mints in Pisidia, Pamphylia and at Alexandria were to continue. Under Tacitus, the number of mints declined still further, with just Perga, in Pamphylia, and Alexandria. After Tacitus, only the latter was to survive, striking tetradrachms for Probus, Carus and his sons. These final examples of Greek imperial

coinage were phased out following Diocletian's coinage reform in AD 294.

Local coinages have been considered more fully by Callu (1969) and Sear (1982). The decreasing output of these local mints must have created a demand for coin produced elsewhere.

The chronological range of barbarous radiates, in relation to the regular coinage.

The chronological range of regular coin types imitated within the barbarous radiate coinage has now been outlined. Giard has dated the earliest types copied in Gaul to the year 263 (Giard 1963). Nothing earlier than this can be argued for British imitations. Copies of Postumus are common in Gaul and are considered by Giard to have been produced in quantity by the final years of this emperor's reign. These are encountered on British sites but are not common finds in this country. Gallienus copies are similarly uncommon in Britain. When they are encountered it is his later types which are represented, with the animal series figuring prominently.

The vast majority of imitations found on British sites imitate regular coin types of a very restricted timespan. The earliest coinage copied in quantity was that of Victorinus. The first Central Empire types copied in quantity were the Divo Claudio issues. The Tetrican coinage was copied in greater quantity than that of Victorinus. Central Empire copies of Aurelian and Tacitus are very rarely found. The latest regular coins imitated within the barbarous radiate series are issues of Probus. H.B. Mattingly recorded examples of Proban copies in the Worthing hoard, from Icklingham (Suffolk), from Mere (Somerset) and from the Caerleon hoard (Mattingly 1964). Boon

recorded a group of 36 Proban imitations at Coygan Camp, which were associated by common dies (Boon 1967). However, Proban copies are not common, especially as site finds.

The range of coinage copied within the barbarous radiate coin series was from the late years of Gallienus' sole reign to the reign of Probus. A greater frequency of earlier types indicates that copying started earlier in Gaul than in Britain. The coinage copied in greatest quantity in Britain was struck between the years 268-74 but it is less clear how long this coin remained in circulation. The rarity of regular issues struck between the end of the Gallic Empire and the usurpation of Carausius, in Britain, would suggest that they were supplemented by, and circulated alongside, the irregular coin, until the more profuse regular issues of Carausius were introduced in 287.

Summary

The coinage of the years 259-286 presented a restricted range of prototypes for copying, although the issues of antoniniani were very large. Barbarous radiates copied the coinage of both the Central and Gallic Empires, but with the vast majority deriving from the latter. The bulk of copies were based on the coinage of a very short, five year, span during which the coinage was at its basest and most uninspiring in appearance; employing a dull range of predominantly static female figurative reverse types.

Some barbarous radiates copies the more varied coin types struck at the beginning and the end of this period, notably the more unusual Central Empire issues. The mint and officina marks could also be imitated. The left-facing busts, animal and other non-figurative types were all occasionally employed.

These exotic types occur in low numbers and help to tie down the chronological range of the barbarous radiate series. The frequency of types imitated is also considered to reflect the official coinage in circulation in Britain, with the most common coins being more frequently copied.

The regular coinage of the period in question has now been outlined. In the remainder of this chapter the question of what constitutes an irregular coin will be considered and just how they differ from the regular coins.

II. The identification of irregular coins

The irregular coinage of distinct periods poses different problems. In his study of imitation coinage of the period 330-48, Hammerson's main task was to establish what constituted an irregular mid-Constantinian coin (Hammerson 1980). The poor quality of the irregular coinage of the late third century means that it is comparatively easy to distinguish many of the imitations, even with an untrained eye. It has consequently been possible to progress from this position in the current study. Nevertheless, a significant amount of coinage does pose problems, notably among site finds. Site finds are always worn to some extent, either by circulation or by corrosion and abrasion in the ground. Barbarous radiate site finds are seldom cleaned or conserved in collections, which adds to the problem of sorting. The main problem area can be defined as when the latest regular issues of the Central Empire became very degraded and small, under Gallienus, Claudius II and Quintillus. It is often very difficult to distinguish these issues from the better-engraved barbarous radiates.

The criteria employed to define a barbarous radiate, for the

purposes of this study, are listed below.

Weight. The weights of regular issues have been studied and published (Robertson 1978; Besly and Bland 1983; Lallemand and Thirion 1970; Weiller 1967). The weights of the many regular issues are varied and will not be studied here. Generally, the irregular coin weights tend to be lower than their regular counterparts, although in the case of cast imitations they may be heavier. Coins should be weighed, whenever possible, for comparison. Use of a balance was seldom possible during the collection of data for this work, in provincial museums. When possible, weights have been recorded but a further problem of differing degrees of accuracy between different balances was noted. A further problem has been the degree of abrasion and corrosion on many site finds, which directly affect the weight. For the purposes of this study, where hoards were studied, or cleaned coins were being studied, a balance was transported to the museum and weights recorded. Otherwise, the comparison of site find weights was considered not to be significant or useful.

Fineness. The regular coinage was struck to an established fineness, to a set metal content. The amount of silver present in antoniniani decreased during the third century, as outlined earlier in this chapter. The irregular coinage did not adhere to the set standards. These coins were struck from an assortment of metal, including melted down antoniniani, and were of variable metal content. Chemical analysis of Divo Claudio issues has shown irregular versions to be virtually devoid of silver and usually containing high proportions of lead (Cope 1969).

Some barbarous radiates show signs of silvering. It is not unusual to find silvered coins in hoards, particularly amongst minims. Occasionally, where overt silvering is not detectable, a black surface deposit may indicate an oxidised silver surface. Such examples have been noted in the Worthing and Caerleon hoards (Lewis and Mattingly 1964) and have been discussed by Boon in relation to the minim sized copies from White Woman's Hole (Boon 1972). Boon argued that the silver appearance would have been commonplace and was thus instrumental in ensuring the acceptance of these tiny coins in circulation, as part of the silver coinage. Such surface silvering could have been lost by circulatory wear, by post-depositional wear, by corrosion or by conservation in a laboratory. Low quality alloys are particularly unstable over time and it is normal for chemical activity to have taken effect throughout a whole coin (Tyler 1972). Whether a silver wash, perhaps with the addition of tin (which could increase the whiteness of a copper-silver alloy) was originally applied to large numbers of these coins is still uncertain.

The application of metal analysis can distinguish irregular from regular issues, although more work still needs to be done to improve our knowledge of official coins. Unfortunately such techniques are very time consuming and require specialist expertise and equipment. It is not possible to use this method to separate out irregular coins within a collection for a survey such as this. More subjective methods have had to be employed.

Size. The diameters of the regular coinage varied widely over the years in question, as shown in figures 3:2-7. A gradual

decrease in size over time is recorded. The sizes also became more variable. However, the size range of the irregular coinage was far more variable than that of the regular coinage. The sizes of regular issues have been outlined and if a coin falls below the size range recorded it is very likely to be irregular. However, many irregular issues were struck at a comparable size to their regular counterparts.

Die-axis. The alignment of obverse and reverse dies during the striking process can indicate whether a coin is likely to be irregular. Throughout the Roman period regular coinage tended to be struck with upper and lower dies aligned, either at 0 or 180 to each other. Precision in this alignment can be associated with coins from regular mints. In order to ascertain the degree of precision associated with the debased antoniniani of this period, which suffer from a lack of quality in other respects, coins from the Silchester collection were once again studied.

Figure 3:8 shows that in the coinages of all the main emperors copied, a degree of alignment was achieved at the regular mints. For the purpose of easy recording, die-axes have been recorded in relation to a clock face, as numbers 1-12. Thus, the numbers 12 and 6 correspond with alignments 0 and 180 degrees. Figure 3:8 was constructed by translating the numbers counted in each category into percentages and then drawn diagrammatically, in relation to a clock face. In all cases the majority of regular coins cluster around the 12 and 6 alignments, with some clustering between 11 and 1, and between 5 and 7. The coinage of Gallienus shows least precision, while greatest accuracy was recorded for Victorinus and the Tetrici!

It is seen that the regular coinage was quite accurately

aligned. Therefore, if a coin of Victorinus or of the Tetrici has a die-axis of 2-4 or 8-10 it has a higher probability of being irregular. However, it is not assumed here that irregular coins did not attempt to follow 0 or 180 degree die-axes. This aspect will be studied more closely in chapters 6-10.

Shape. Copies of earlier issues, notably those of Postumus, tend to be better in shape and exhibit comparable flans. Subsequent regular issues, in particular those of Victorinus and the Tetrici, deteriorated to the extent that flans became more variable in size and shape. Signs of splaying and cracking around the edges is common. Parts of legends may, therefore, be missing and flans could be oval in shape. These traits became more accentuated on irregular issues. Oval, even square, shaped flans are found and less care was taken to match flan shape to die sizes. Flans invariably miss part of the legend in irregular coins and tend to be too small, although some show an equal lack of care and are too large. The shape of regular coins improved markedly following Aurelian's coin reform.

In summary, a coin exhibiting an irregular, or variable, flan shape is likely to be a barbarous radiate. The odd shapes encountered among these coins means that diameters recorded in this work are maximum diameters across flans. If a coin is exceptionally elongated, with a narrow waist, measurements are recorded both across the maximum diameter and across the waist.

Lettering. The quality of lettering employed in the legend can indicate whether or not a coin is irregular. Style of

lettering can be diagnostic of a particular mint and has been used to help distinguish styles present within the Gallic Empire coinage. At a more basic level, the legend of a coin is the most likely place to find an error committed during the process of copying. Many irregular moneyers were obviously illiterate and were prone to simple errors when slavishly transposing a legend. Simple dashes replace letters in some cases. Others copy letters closely but show lesser errors such as inverting or omitting a letter. Others may carry the correct letters but the numerals may be too large, may be variable in size or exhibit larger gaps between letters. The legend was the most difficult part of a coin to copy for an untrained engraver and irregular coins are frequently betrayed in this way.

Colour. Irregular moneyers would melt down and use any scraps of metal in the preparation of barbarous radiate flans. Accordingly, the coins show a range of colours not encountered among regular coins. A group of official coins which adhere, however approximately, to a standard of metal content will exhibit an outward similarity of colour. Silver antoniniani can be separated readily. More debased issues of Victorinus and Tetrici will appear a standard dark copper/olive green colour, when cleaned. If examples are laid out and compared side by side it may be possible to remove irregular examples because of their variation in colour, which may be excessively brassy yellow. Sorting in this way is easiest when a large number of clean coins are together and can be compared, such as in the case of a hoard. This method of sorting can then be complemented by the other methods under consideration.

Types. A knowledge of the regular coinage can help greatly in distinguishing some irregular issues. Some barbarous radiates may otherwise pass as official coins but are betrayed because they employ types not used by a particular emperor. However, care must be taken because regular hybrids were also common at this time.

Style. In the above categories it has been shown that the regular coinage possessed specific physical traits, such as size, shape and die-axis alignment. When a coin varies from the normal appearance, under each category, it is likely to be irregular. These criteria may still leave room for doubt in many cases, especially where the coins are abraded and damaged. The most important criterion is that of engraving style and this needs to be employed in most cases in order to make certain.

The separation of regular and irregular coins by stylistic examination requires accumulated experience from handling coins - in particular the regular issues. When the range of styles employed at the official mints is understood, this method of sorting issues is quickest and most reliable. It is noted that styles of engraving for each emperor could vary significantly, for example between the western and eastern mints under Gallienus. An appreciation of style can only be properly judged with experience.

In conclusion, the poor state of preservation of most coins recovered from excavated sites is a major inhibiting factor in the sorting and identification process. Site finds generally suffer badly from corrosion and exhibit wear derived from

vigorous circulation. These problems add to those usually associated with irregular coins, such as absent legends, off-centre striking and blurred relief, resulting from the over-use of dies. A standard proportion of site finds will always be unclassifiable for these reasons and the percentage will increase with more acidic soil conditions. It has been decided that for the purposes of this study, a coin will only be classified as irregular if there is a definite irregular trait present. If there is no specific characteristic to show that a coin is irregular it is left as a regular issue.

Chapter 4. The Classification of Barbarous Radiates

Introduction

The lack of a recognised method of classification for barbarous radiates has hindered advancement in their study. No kind of catalogue exists, against which examples can be referred. The highly variable irregular coinage presents many problems for those wishing to describe and list such coins and until a work of reference is published they will continue to be lumped together in a single category, in coin lists. A useful classification will employ a more detailed sorting by type and will ultimately allow the comparison of coins between sites, and the establishment of further die-links.

Methods of classification have been put forward by previous writers. They will be reviewed in this chapter. The method to be used in this study, for use with coins in a poor state of preservation, will then be outlined. Ultimately, the most useful method will involve reference to established die- and style-groups. For this purpose, the major die- and style-groups already known are described and illustrated here in the second part of this chapter. It is this approach that will eventually be organised into a work of reference, when sufficient die- and style-groups are known.

I. Classification

Previous methods of classification

C.H.V.Sutherland has contributed greatly to the development of a workable classification for barbarous radiates. Although not the first to employ a form of listing based on coin reverse types (a method employed as long ago as the nineteenth century) Sutherland was to provide valuable discussion and to develop

this method. In his publication of a hoard of radiate minimi from the west of England he ordered the coins firstly by emperors and secondly under reverse types, 'as accurately as the degraded standard of art and the imperfections of executions allow' (Sutherland 1934). He provided a subsidiary section for 'debased radiate copies' in which he divided types into three sections; (i) with Gallic Empire prototypes and listed by reverses, (ii) Consecratio types, (iii) Miscellaneous - uncertain types. He then sub-divided each class into, (a) animate and (b) inanimate designs.

In 'Coinage and Currency in Roman Britain' Sutherland developed this classification, outlining the question in a separate appendix (Sutherland 1937). The main principles by which radiate copies were to be classified were outlined and discussed at length as; portraiture, size, fabric, technique, legends, local characteristics (a geographical form of grouping based upon the belief that regional styles could be separated) and reverse types (sub-divided between animate and inanimate). Accompanying each category, Sutherland outlined the range of variation seen in the coins and discussed examples to illustrate them. He concluded that the category of reverse types was the most versatile overall method. He also employed the following descriptions when listing coins;

FR - for a regular shaped flan

FI - for an irregular shaped flan

FC - for a flan clipped from a sheet of metal

FCR - for a flan cut from a metal rod.

In addition, he listed nine alternative descriptions relating to the degree of correctness of legends.

These descriptive criteria are not easy to apply, especially

to site finds, where legends will be part missing and flans worn. The categories are really too subjective to allow adequate standardisation between reports. They are also too complicated to apply to the large volume of coinage in question, unless a computerised listing were to be used.

Sutherland's contribution was a thoughtful and an invaluable contribution to the study of barbarous radiates. It is still a useful, if neglected, reference work. He listed the reverse types used and provided many illustrations.

A further important contribution to the study was published by P.V.Hill (Hill 1949). The author basically employed a classification using reverse types but again added descriptions, based upon quality of engraving. This was a similar approach to that employed by Sutherland for sorting imitations of Claudius I. He had employed four grades of copy, of decreasing quality (Sutherland 1935b). Hill applied three grades to barbarous radiates, as follows:-

Grade I - accurate, with good lettering

Grade II - a fall in quality and weak legend

Grade III - the poorest quality, with stylised types and legends either absent or completely erroneous.

The high degree of subjectivity necessary rendered this scheme practically unworkable. Divisions between the grades were not easy and too arbitrary. Other scholars did attempt to follow Hill's scheme, as in the case of the Bischoffsheim hoard, where the authors managed to separate all copies into three grades (Longuet and Banderet 1955). Unfortunately the results are not very useful and would be quite different if sorting was undertaken by other workers. This scheme was not generally taken up.

To summarise the position, the method of classification that

has found most favour to date is that of listing coins firstly by emperor and then by reverse type. Other refinements, based on subsidiary description of individual coins have not proven very successful. Sutherland realised that his method, though 'not exactly scientific', was the most workable and uncomplicated scheme applicable to such a 'difficult and unwieldy group of coinage' (Sutherland 1937).

An improvement to this general scheme was possible in the case of the large Saint-Mard I hoard. In this case the authors listed the imitations under emperors and reverses. Then, under the Tetrici, coins were grouped together by styles and diagnostic traits, each group being explained and supported by illustrations (Lallemant and Thirion 1970). H.B. Mattingly has also sorted hoard material into groups based on die- and style-linking. Such classification is possible in the context of a hoard if it is large enough to allow such groups to be distinguished. This is not easily applicable to site finds, as will be discussed below.

The classification to be used

For the purpose of a good classification, it is essential that coins from different collections can be compared and that different workers are able to apply the same classification and thereby obtain comparable results. For these reasons, the categories employed need to be broad and undue subjectivity has been avoided. The classification followed here is largely that established by Sutherland. The classification used can be summarised:-

1. Coin sorted under Central Empire, Gallic Empire or Illegible.

2. If coin falls within the first two categories it can then be sorted under emperor.
3. The reverse type employed under the emperor in question.
4. Coins listed in size order within the above categories.
Many minims (coins of 13 mm diameter or less) are too small to carry clearly identifiable reverses. Such minims are quantified together.
5. Unusual categories listed separately, either under emperor or at the end.
6. Those examples belonging to established die- and style groups listed as such.
7. Partly legible coins. Separate categories provided, depending on which parts of the coin are clear, such as by emperor with illegible reverse or illegible obverse with female figure reverse.
8. Totally illegible barbarous radiates are quantified. Such coins will have been identified as barbarous radiates by shape, size, weight or by a remaining fragment of lettering or engraving.

Use of the term 'minim'

The term 'minim' has been employed above. This term has been used since the nineteenth century in order to refer to the irregular Roman coins of the smallest module. The word has been used to describe imitations of the late third century and the fourth century, while the term 'minimissimi' has been used for the very tiny fourth century types (Boon 1961). 'Minim' is a vague term and has no precise numismatic definition. However, it is useful to have a word to collectively refer to these small imitations. For the purposes of this work, the term 'minim', unless qualified, will refer to those imitations

of 13 mm diameter, or below.

It is not possible to define a distinct division between barbarous radiates of small and large diameter and so any division of this nature is, to some extent, arbitrary. These coins exhibit a continuous range in size, from about 23 mm down to about 6 mm and even to just 4 mm. However, it is clear that the coins of below 13 mm are completely distinct in their appearance from regular coins, which could fall to about 15 mm diameter. By employing a cut-off point of 13 mm it is possible to separate those imitations of near regular size (many with good engravings) from those which cannot be mistaken for regular types. Below 13 mm, the engravings often become simplified and stylised. It is stressed that this definition of a minim sometimes needs qualification. Some coins which were struck by small dies and which are similar, or even die-linked, to other minims may possess flans that are splayed beyond the 13 mm division.

In conclusion, it is possible to detect differences in site and hoard collections with regard to larger and smaller barbarous radiate imitations. It is considered useful to employ the existing term 'minim' to distinguish the smaller types. A definition of 13 mm maximum diameter is employed here, with qualification, when appropriate.

The manufacture of radiate copies

The different methods of manufacture employed for barbarous radiates account, to some extent, for the diverse physical appearance of this coin series. It is therefore important to describe the methods used, in the section dealing with the classification of the different types. Products of the

different methods are not illustrated here but they will be shown during the course of succeeding chapters.

A. Casting

The use of moulds to produce copies of the regular coinage was used in the years preceding the main circulation of barbarous radiates, notably during the earlier years of the third century. Moulds were generally made of a hard-fired clay disc, about 10 mm wider in diameter than the coin to be case. Each disc would receive the impression of a regular coin; either obverse or reverse. Both halves would then be placed together and a channel in the side allowed metal to be poured into the hole. Such moulds could be stacked one above the other. Despite their fragile nature, these moulds could be re-used. The coins produced by this process tend to be smaller than the originals, due to a shrinkage in the clay during the process. They also tend to lack clarity of detail and may exhibit a casting line around the edge of the flan.

B. Striking

This process accounts for the overwhelming proportion of barbarous radiates. Striking involved the use of an obverse die, which was set upon an anvil, below an upper (reverse) die. A coin blank would be inserted between the two dies and the upper die was then struck with a hammer to impart the die impressions. The blanks used could be cast as pellets in moulds or could be cut from sheet metal or rods.

In general there was a lack of precision in the preparation of flans for barbarous radiates. Circular flans are the exception and most exhibit poor and eccentric shapes. This often resulted in the loss of part of a die impression. Larger

module barbarous radiates tend to have better-shaped flans. More unusual features may be seen in the case of minims. These include:

- (i) flans with a 'tail' - the 'peardrop' shape. A flan could be prepared from a hot globule of metal, being flattened before striking.
- (ii) clipping. Minims were often struck on flans prepared by clipping from sheet metal. Shears were used to cut out a rough flan shape. Some were more carefully rounded, while others were left as crude squares.
- (iii) flans cut from metal rods. Appropriate thicknesses of metal could be sawn off from metal rods to form chunky, but circular, flans. Such examples could be wedge-shaped in profile.
- (iv) cracking. Flans of all sizes can be found with cracks. This common fault was caused by the metal being allowed to cool for too long before striking.

Items have been found which have been associated with the manufacture of these coins. They include small crucibles for pouring molten metal, small chisels, and copper wire - of uncertain function.

The different traits will be encountered in the Plates below. The degree of diversity encountered in the techniques of production shows that there was not an overall centralised system or organisation in the coin series as a whole. The variety of methods, and diversity of engraving skill reflect a lack of tight organisation and expertise. If organisation did exist it may be detectable at a regional level or within coins struck during a very short timespan. These aspect must be reconsidered at a later stage.

II. Established die- and style-groups

Barbarous radiates that are associated by common dies and by closeness of style have been identified on numerous occasions and such instances have been published within hoard reports. The main reports in question have already been mentioned during discussion of the literature, in chapter 2. An important body of information has been built up in this way. Some of the reports in question are published in journals which are not easily accessible and a summary of these groups will be worthwhile. It is intended that this will obviate the need for searching through journals for comparative information and that this will also help to clarify the overall situation; presenting this information in one place.

Drawings of the main recurring types have been included in figure 1. Photographs have been included in the original publications and are not included here. Descriptions are provided, complemented by line drawings which show the essential characteristics. In each case the location of known examples, their numbers and full references have been provided.

The provision of names for these groups has been a problem. Each group has been given a reference letter here. Where a name for the group is possible, this too is provided. A better scheme of nomenclature is needed but first all groups must become known and the data from the current study added, before such progress can profitably be made.

The groups summarised here include coins linked by the use of common dies and by style. Some groups, for example group A and group B below, are extensive and include both kinds of link. It is stressed here that the following section is a review of published work undertaken by others. The number of die-links, as opposed to style-links, is not always precisely

stated by the appropriate author - nor is it always easy to ascertain from such coins. These groups have not been revised here and the information shown is the result of other scholars' interpretation. However, some of these groups will be revised in the light of site finds from the current study, in subsequent chapters.

Group A. The Pax Aug Group

Locations: The following hoards:- Calverton (Notts), Lightwood (Staffs), Worthing, Goring-on-Sea and Hove (all Sussex), Whitchurch (Avon), Richborough (Kent), and Paternoster Row (London).

References: H.B.Mattingly, 1961, p.10 and Plate I, 29-35.

H.B.Mattingly, 1963, p.23 and Plate II, 18-33.

H.B.Mattingly, 1964, pp 198-9 and Plate XVI, 34-58.

H.B.Mattingly, 1967b, pp 58-9 and Plate I, 15-17.

An extensive group, incorporating die- and style-links.

Numbers recorded: Worthing - 33, Goring - 15, Hove - 5,
Calverton - 27, Richborough - 1,
Paternoster Row - 3.

Description: Flan up to 15 mm diameter but often of 13 mm or less. The reverse carries a stiff figure of Pax, holding a palm leaf, cornucopiae or caduceus, or sometimes a staff. A crude legend frequently leaves visible the letters V and A in the field, right. The obverse carries a simplified Tetrican portrait, with slightly angular features.

Most examples were probably produced at a single mint but some may be local derivatives; copies from the main group.

Mattingly tentatively located the mint between Calverton and Worthing (Mattingly 1967b, 59).

Three obverses are shown in figure 4:1. The first two show the degree of variation encountered in the obverse portrait, while the third shows a more heavily-bearded variant.

Group B. The Invictus/Sacrificial Implements (Ewer) Group

Locations: The Calverton (Notts), Lightwood (Staffs), Worthing and Goring (Sussex) and Richborough (Kent) hoards. Ancaster (Lincs) site.

References: H.B.Mattingly, 1963, p.22 and Plate II, 5-15.

H.B.Mattingly, 1967b, p.60 and Plate I, 19-27.

An extensive die-linked and style-linked group.

Description: Mattingly described the obverses as having 'wide, squat, "Tetrican" heads'. They usually have a V-shaped neck. The reverse can be the Invictus of Victorinus or a simple ewer, derived from Tetricus II's sacrificial implements reverse (Pietas Augg/Augustor), leaving out the subsidiary implements. Very occasionally other figurative reverses may be used. Mattingly has identified the group as being mainly the work of a single mint, probably located in the Midlands.

A single obverse, showing the main characteristics, is shown in figure 4:1. Both reverse forms are shown.

Group C

Locations: Calverton (Notts), Worthing (Sussex) and Richborough (Kent) hoards. Ancaster and South Witham (both Lincs) sites.

References: H.B.Mattingly, 1964, p.192 and Plate XVII, 3-6.

H.B.Mattingly, 1967b, p.60 and Plate I, 28-9.

Description: Mattingly described the characteristics as

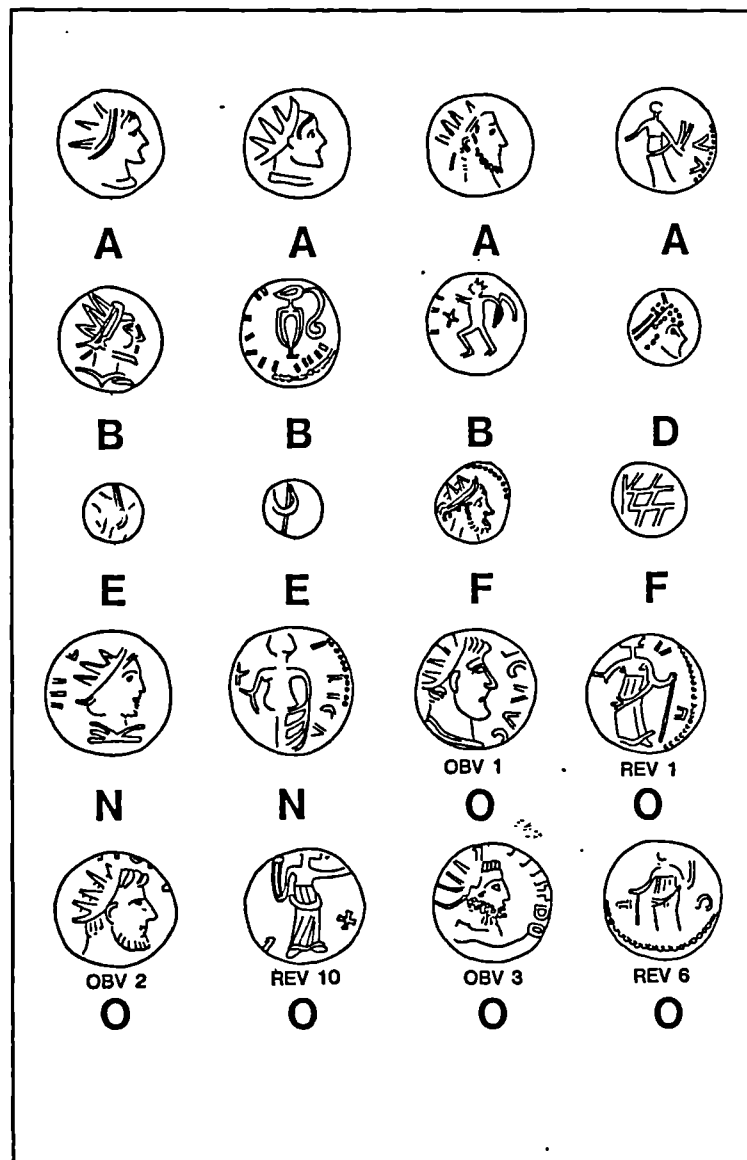


Fig.4:1 Published die- and style-groups. Scale 1:1

'blurred, spongy fabric and rather neat obverse and reverse style'. An Ancaster examples shares both dies with examples from Calverton and from South Witham. The engraving is difficult to show as a line drawing and has not been reproduced in figure 4:1.

Group D

Locations: The Calverton (Notts), Worthing and Goring (Sussex) hoards.

References: H.B.Mattingly, 1964, p.193 and Plate XVII, 7-13.

H.B.Mattingly, 1967b, p.58 and Plate I, 9.

A die-linked and style-linked group.

Description: Mattingly described the portrait as being reminiscent of Claudius II, with the hair shown by a series of dots. The prototype was probably a coin of Quintillus, whose portrait closely resembled that of his brother and whose hair was depicted in that way.

Mattingly considered these coins to have originated in the south of England. Just one example came from Calverton, with others coming from Sussex. The obverse is illustrated in figure 4:1.

Group E

Locations: The Worthing and Goring (Sussex) hoards.

References: H.B.Mattingly, 1964, p.193 and Plate XVII, 22-3.

H.B.Mattingly, 1967b, p.58 and Plate I, 10.

A die-linked group.

Description: Characteristic left-facing bust, possibly of Claudius II. Die too long for the minim flan. Four examples came from Worthing and just one from Goring. Drawings of both the obverse and reverse are shown on figure 4:1.

Group E

Locations: The Worthing and Goring (Sussex) hoards.

References: H.B.Mattingly, 1964, p.193 and Plate XVII, 25-30.

H.B.Mattingly, 1967b, p.58 and Plate I, 11.

A die-linked group.

Description: Fourteen coins from Worthing share a single obverse die but employ six different reverse dies. The example from Goring uses yet another reverse. The obverse has a simple face, with sharp nose and prominent beard. No legend is present on either side. The reverses all comprise an arrangement of lines and are very similar, although only a few die-link.

The obverse is shown on figure 4:1. Just one reverse variant is shown. The other forms show very similar geometric shapes.

Group G

Location: The Worthing and Goring (Sussex) hoards.

Reference: H.B.Mattingly, 1967b, pp 58-9 and Plate I, 12-13.

A die-linked group.

Description: Two Goring coins share both dies with a Worthing coin. Mattingly noted the similarity to the major group of coins described here as group A. They almost certainly issued from the same irregular mint.

Group H

Locations: The Goring (Sussex) and Calverton (Notts) hoards.

Reference: H.B.Mattingly, 1967b, p.58 and Plate I, 18.

Description: One example comes from each of the hoards, struck from the same two dies. The obverse has a simple, crescent-shaped, face. The reverse is a left-facing figure of Mars.

Group I

Locations: The Calverton (Notts) and Lightwood (Staffs) hoards.

Reference: H.B. Mattingly, 1963, p.22 and Plate II, 1-2.

Description: The obverse engraving is Tetricus I, with an extremely bushy beard. No legend is visible. Fifty-seven coins from Lightwood were struck from the same pair of dies. A single specimen comes from Calverton I.

Group J

Locations: The Calverton (Notts) and Lightwood (Staffs) hoards.

Reference: H.B. Mattingly, 1963, p.22 and Plate II, 3.

Description: A common reverse die is shared by a single coin from each hoard. The engraving shows a male figure, right, holding a spear diagonally.

Group K

Locations: The Calverton (Notts) and South Witham (Lincs) hoards.

Reference: H.B. Mattingly, 1963, p.23.

A single coin at each location was found to have been struck from the same pair of dies.

Group L

Locations: The Calverton (Notts) and Mere (Wilts) hoards.

Reference: H.B. Mattingly, 1963, p.23 and Plate II, 16.

Two coins from Calverton, sharing common dies, also share an obverse die with a coin in the Mere hoard (Wiltshire).

Group M

Locations: The Calverton (Notts) and Icklingham (Suffolk) hoards.

Reference: H.B. Mattingly, 1963, p.23 and Plate II, 17.

Description: A style group, with a single example from each location. The obverse portrays Gallienus and although the reverse style is similar, different types are reproduced. The coin from Calverton is Fortuna Redux, while the example from Icklingham is Felicitas Aug.

Group N. The Tetricus II/Spes group

Locations: The Paternoster Row (London) and Hollingbourne (Kent) hoards. Verulamium (site find).

Reference: H.B. Mattingly, 1967a, pp 66-7 and Plate VII, 36.

The example from Verulamium is illustrated in Numismatic Chronicle 1948, p.89, 5 (this coin was a stray find from the theatre). Numismatic Chronicle 1964, Plate XVIII, 101.

Description: Mattingly decided that the characteristic square-headed head used on the obverse of this very distinctive style group belonged to Tetricus II. It is possible that the engraver intended to represent Tetricus I. It can be seen in the Hollingbourne hoard example that the legend is -TETRICVS PF AVG. Hairs may also be identifiable beneath the chin, indicative of the father. The diameter is large, at 17 mm. The reverse is a version of Spes Publica - a type struck by Tetricus I at Cologne.

A line drawing of the type is provided in figure 4:1.

Group O. The London, Lime Street Hoard links

A single letter has been allocated to this hoard which comprises 32 barbarous radiates, which were linked by the common use of 10 obverse dies and 11 reverse dies. No links have yet been found outside the hoard.

Reference: R.Merrifield, 1955, pp 113-24.

These irregular coins were of large module, between 15 mm and 17 mm diameter. Merrifield has described the die-combinations in full detail. Line drawings here represent the main obverse and reverse dies. Those examples illustrated in figure 4:1 are:- Obverse 1 (used in 11 examples), obverse 2 (used in 5 examples), obverse 5 (used in 2 examples), reverse 1 (used in 11 examples), reverse 10 (used in 5 examples) and reverse 6, used in 2 examples.

Group P

Locations: The Whitchurch (Avon) and Mere (Wilts) hoards.

Reference: H.B.Mattingly, 1963, p.23.

An example from each hoard was struck with the same pair of dies.

Group Q

Locations: Calverton (Notts) and Whitchurch (Avon) hoards.

Reference: H.B.Mattingly, 1963, p.23 and Plate II, 18-24, 27-31.

A style-group only. There are eight examples at Calverton and four at Whitchurch.

Description: Between 13 mm and 15 mm diameter. Obverse shows Tetricus I, with precise detail. The reverse seems to be based on Pax. No legend on either face. Both obverse and reverse resembles the Pax Aug group (Group A).

Group R

Locations: Whitchurch (Avon) and Mere (Wilts) hoards.

Reference: H.B.Mattingly, 1963, p.23.

One coin from each hoard was struck from the same obverse and reverse dies. No further details available.

Other internal hoard groups

In addition to providing details of external die- and style-linking, Professor Mattingly has identified instances of internal linking within hoards.

The Lightwood hoard (Mattingly 1963, 19-36).

Three groups of internal die-links were identified.

1. Two coins. Obv. and rev. die-links. Obv. - Tetricus I, rev. - Pax Aug.
2. Three coins. Rev. die-linked. Two obverses used. Rev. - Pax Aug., with transverse sceptre. Illustration - Mattingly 1963, Pl.I, 31-2.
3. Four coins. Obv. die-linked. Rev. - Oriens. Illustration - Pl.I, 33.

The Calverton hoards (Mattingly 1961, 9-19).

Four groups of imitations, obverse and reverse die-identical, were present at Calverton I and II, in the following numbers:

	Calverton I	Calverton II
Group 1	34	8
Group 2	33	4
Group 3	20	6
Group 4	18	9

Other groups within Calverton I

5. Eleven obv. and rev. die-linked coins. Obv. - Victorinus, rev. - Providentia.
6. Seven obv. and rev. die-linked coins. Obv. - Tetricus I.
7. Six Obv. and rev. die-links. Obv. - Tetricus II.
8. Nine coins. Rev. die-links. Two with obv. of Salonina and seven with Tetricus II.

The Goring-on-Sea hoard (Mattingly 1967b).

There were six groups of internal die-links.

1. Nineteen obv. and rev. die-links. Rev. - Invictus. No legend.
2. Seven obv. and rev. die-links. Rev. - male figure with club. (Pl.I, 4).
3. Eight rev. die-links. Three different obvs. Rev. - figure holding staff and spear. (Pl.I, 5-7).
4. Two obv. and rev. die-links. Rev. - male figure. Minims.
5. Two obv. and rev. die-links. Obv. - Claudius II. Rev. - Providentia.
6. Two obv. and rev. die-links. Rev. - Pax Aug. (Pl.I, 14).

The Worthing hoard (Mattingly 1964, 189-99)

Thirteen groups were identified.

1. Six obv. die-links. Obv. - Severina. Illustration - Mattingly 1964, Pl.XVII, 15-20.
2. Fourteen obv. die-links. Eight different revs. (Pl.XVII, 25-30).
3. Five obv. and rev. die-linked minims. Rev. - 'Invictis'. (Pl.XVII, 24).
4. Four obv. die-linked minims. Two revs. Obv. - head left.

(Pl.XVII, 22-3).

5. Four obv. die-linked minims. Obv. - Claudius II, rev. - altar. (Pl.XVII, 31).
6. Two obv. and rev. die-links. Rev. - altar or temple. (Pl.XVII, 32).
7. Three obv. die-links. Similar to group 6. (Pl.XVII, 33).
8. Two obv. and rev. die-links. Obv. - head left. Rev. - altar.
9. Two obv. die-links. Obv. - head left. Rev. - altar.
10. Two obv. and rev. die-links. Rev. - Pax Aug, with vertical sceptre.
11. Two obv. die-links. Revs. similar to group 10. (Pl.XVII, 34).
12. Two obv. die-links. Rev. - 'star'.
13. Two obv. die-links. Rev. - 'star', similar to group 12.

The published barbarous radiates die- and style-groups summarised here are an initial reference point against which new material can be compared. The approach used for the compilation of new data will now be discussed.

Chapter 5. The Study of Site Finds

Our current knowledge of barbarous radiates has been assembled piecemeal over many years in many publications. These have been reviewed in Chapter 2. This knowledge has largely centred on analyses of hoards, when they have become available for study. It was possible for the current study to plan a programme of research at the outset, which has not been employed before. The methods that had been most profitably used to provide a firm background of knowledge of these coins could again be employed, but in relation to a systematic study of new data.

A potentially vast amount of coins were available for this study. Barbarous radiates have been found from almost all Roman sites in Britain, from excavation and casual recovery. They are present in well over a hundred published hoards from Britain, many of which contain unstudied examples. These coins are held in many collections; by museums, by private collectors and by Archaeological Units. As the emphasis of previous research has been concerned with hoards, it was decided that this new study should concentrate on English site finds, which have not received specific attention in their own right. Such a data base offered easy access to large quantities of coins from the whole of the country.

The initial aim of this study was, therefore, to record and study as much of the available, previously unstudied, material as possible. It was important at the outset that collections were chosen for study in a systematic way, in order to obtain a cohesive set of results. One possible alternative was to look at collections from all major sites across the country, to the exclusion of lesser sites. However, the approach favoured was

to look at collections from all sites within a geographically restricted area. In this way, it was possible to study more coins, obviating the need for excessive travelling between coin collections, and to establish a more complete picture of the coinage used within a lesser, although still quite large, area of Britain. From my research base in Berkshire, I chose to restrict the study to the south of England.

The coins studied come from fifteen adjacent southern counties. The most northerly sites represented are in Gloucestershire, Oxfordshire, Buckinghamshire and Essex. The east-west span reaches from Kent to Somerset, while the south coast defines the other extent of the study area. The area enclosed between these extremes has been studied as thoroughly as possible, although some collections were not available for research purposes. In addition, some comparative French material, from the north of Gaul, has also been recorded.

Therefore, against the sound background of previous barbarous radiate research, I set out to sort, classify, photograph and catalogue as many examples of site finds to which I could gain access. A prime objective was to look for die-linked coins within and between collections. In this way, it was hoped that substantial new die-groups could be established and that a useful reference work could be constructed from these. As a result of such information, it was hoped that the frequency and location of irregular mints could be identified.

The part of southern England covered by the survey contains a vast amount of excavated irregular coinage. Tens of thousands of coins have been seen during the study, including material from outside the area, for comparative purposes. ²⁴

However, the data collected for this survey comprises 16,000 coins recorded from some 50 museums and collections, during a three year period. Extensive use was made of photography during their recording and over 13,000 have been photographed.

The emphasis of this study has been site finds. Southern England contains many third century hoards, some of which are important and relevant to this study; others are relevant but unpublished. The importance of taking hoard evidence into consideration to complement the site finds became apparent. Where possible, hoards have been personally inspected and recorded because even published hoards generally only illustrate a selection of examples present. Photography was used to obtain a complete comparative record.

The find-spots of all site finds recorded in this work have been summarised on map 5:1. The map is quantitative, employing different symbols for more coins found. A comparatively high number of finds from a specific location may not indicate the importance of a site but may reflect a greater intensity of archaeological investigation. Hoards within the study area have been recorded on maps 6:1, 7:1, 8:1, 9:1 and 10:1. Map 5:1 is a summary of the recording stage of this investigation.

The very large quantity of data recorded for this study has proven problematic in terms of synthesis and presentation. Information on the coins will be presented in two ways. A complete catalogue has been prepared to accompany the work, which lists every coin; arranged by site and located by county. The English collections are discussed and compared in chapters 6-10, together with relevant photographs and figures. The collections have been referred to by county, for ease of reference, and the coinage of each county has been discussed

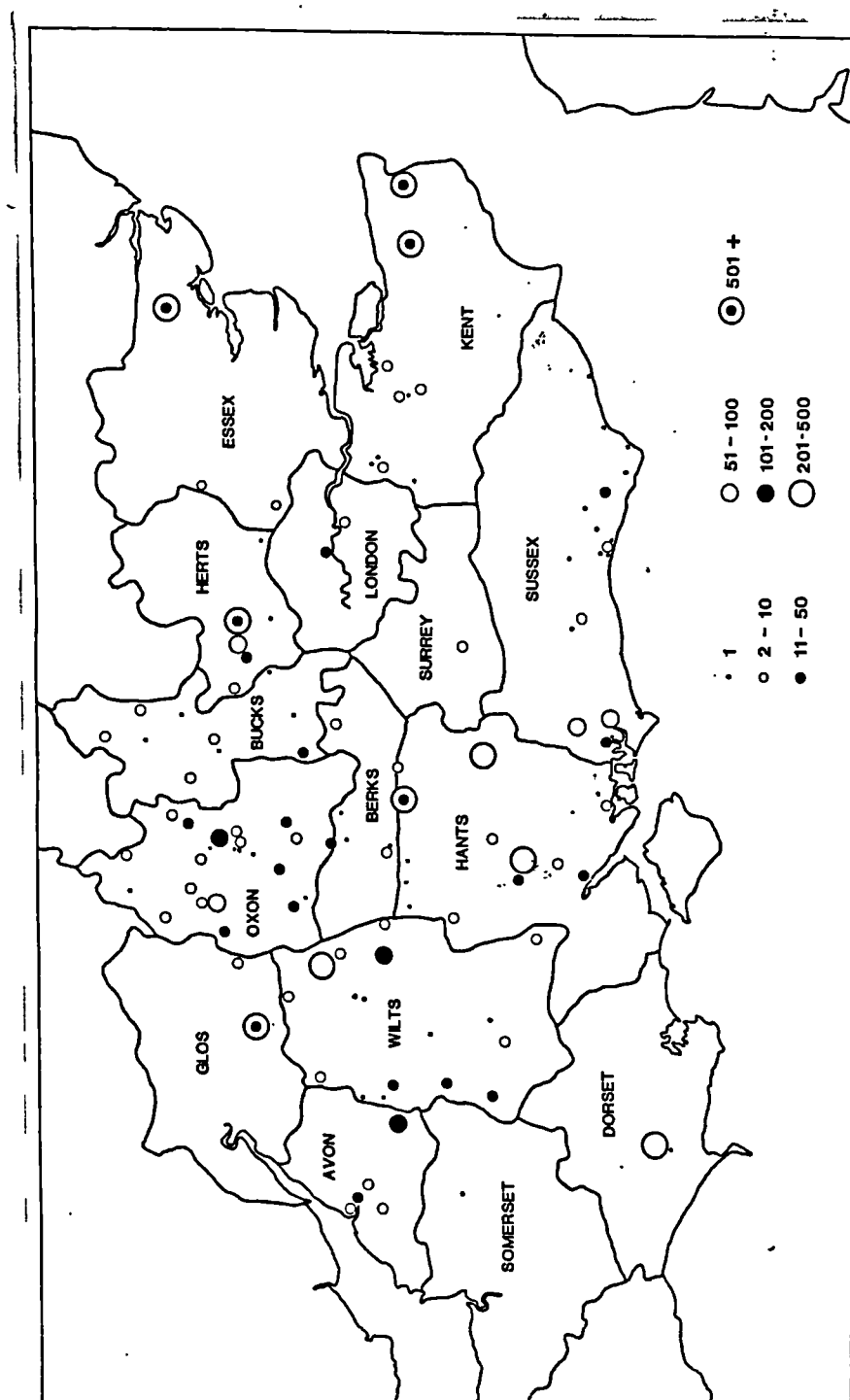


Fig.5:1 Map of site find sources

and arranged together.

The arrangement of chapters 6-10 has been to divide the fifteen counties studied into five groups, each of suitable size for useful discussion. For example, chapter 6 considers the coinage of the west country together, comprising the counties of Gloucestershire, Avon, Wiltshire, Dorset and Somerset. It was considered that separate chapters for each county would not facilitate comparison between sites and would appear unduly repetitive in presentation. The five county groups to be considered are arranged roughly from west to east and comprise:-

chapter 6: Gloucestershire, Avon, Wiltshire, Dorset and Somerset.

chapter 7: Oxfordshire, Buckinghamshire and Hertfordshire.

chapter 8: Berkshire and Hampshire.

chapter 9: Sussex.

chapter 10: Kent, London, Essex and Surrey.

Chapter 9 can be seen to deal solely with the coinage of a single county but the importance of the hoards discovered in Sussex was such that this county has been given separate consideration.

The collections used

Gloucestershire Cirencester Museum

Cirencester Excavation Committee

Avon Bristol City Museum

Other coins courtesy of Mr R. Kenyon and

Dr D. Nash

Wiltshire Ashmolean Museum

Devizes Museum

Newbury Museum

	Swindon Museum
Dorset	Dorchester Museum
	Other coins courtesy of Mr D.Algar and Mr M.Corney
Somerset	The British Museum
	Taunton Museum
Oxfordshire	Ashmolean Museum
	The British Museum
	Newbury Museum
	Reading University collection
	Woodstock Museum
	Other coins courtesy Professor S.S.Frere
Buckinghamshire	Ashmolean Museum
	Aylesbury Museum
	Other coins courtesy Mr D.Neal
Hertfordshire	The British Museum
	Verulamium Museum
	Other coins courtesy Professor S.S.Frere, Mr R.Kenyon, Mr D.Neal
Berkshire	Newbury Museum
	Reading Museum
	Reading University collection
	Other coins courtesy Mr V.Gaffney and Mr M.Tingle
Hampshire	Ashmolean Museum
	Basingstoke Museum
	Newbury Museum
	Portsmouth Museum
	Reading Museum
	Southampton Museum

Winchester Museum

Winchester Excavation Committee

Other coins courtesy Mr M. Corney, Dr

M. G. Fulford, Mr R. Kenyon

Sussex

Brighton Museum

Chichester Museum

Fisbourne Museum

Hove Museum

Lewes Museum

Worthing Museum

Other coins courtesy Mr R. Kenyon

Kent

Canterbury Museum

Canterbury Archaeological Trust

Dartford Museum

Department of the Environment, Fortress
House

Maidstone Museum

Other coins courtesy Professor S. S. Frere

London

Maidstone Museum

Museum of London

Passmore Edwards Museum

Essex

Colchester Museum

Colchester Archaeological Trust

Essex Archaeological Unit, Chelmsford

Passmore Edwards Museum

Surrey

Guildford Museum

Further British coins have been made available by Dr
R. M. Reece and by the British Museum. In addition, the
following collections were studied in France:- The Cabinet des
Medailles, Bibliotheque Nationale, Paris; Rouen Museum;
collection of M. F. Vasselle, Amiens.

The area studied in England constitutes the lowland zone, which was both most fully Romanised and most densely settled. It has been attempted, within this area, to study all available coin collections which contain barbarous radiates, except in the case of Somerset, which was included in the study because of the hoards from the county. All collections have not been seen but attempts were made to obtain access to all collections, which very occasionally proved unsuccessful. The most noticeable gap in find concentration occurs across the Weald. A general absence of Roman finds from this area of woodland can be seen on the Ordnance Survey map of Roman Britain (1978). The coins recorded for this survey come from the settled area of southern Britain. They should constitute a representative sample of the irregular antoniniani used in this area, with no seriously unrepresentative gaps in coverage.

The information recorded

As much information as possible was recorded for each individual coin studied. This data was recorded in a way that would readily enable easy comparison between collections. The following data were recorded.

1. Obverse and reverse photograph. Photographs were enlarged to twice-life size for working purposes but are presented at 1:1.
2. Diameter. In millimetres, measured across the widest part of the flan.
3. Thickness. When coins were unusually thick, this measurement was also recorded.
4. Die-axis. This alignment was recorded by use of an arrow but has been translated into numbers from 1 to 12, relating

to a clock face, for purposes of the catalogue entries.

5. Legends. The lettering is almost always obscured, to some extent, on site finds. Where legible, the lettering has been recorded.
6. Observe and reverse types.
7. Weight. This has not generally been recorded in the case of site finds (see chapter 3). However, in the case of unworn and cleaned hoard coins, a balance was transported to the museum and coins weighed, when possible.
8. Provenance. Large numbers of unprovenanced barbarous radiates have been encountered in the trays of all museums. Such coins are of much less use. They have only been recorded when they possess unusual or noteworthy characteristics.
9. Collection number. Museum collection number or small find numbers have been recorded in order that coins could be readily re-located within their collections.

The collections studied for this survey had already been sorted. The barbarous radiates had already been separated from the regular issues. Regular coin runs have been searched for any further examples in all cases unless those coins had previously been dispersed. As a result of this work, the numbers of barbarous radiates listed from collections may be considered minimum figures. In some collections a number of examples may have been missed, in particular among the Divo Claudio, Consecratio issues which are very difficult to judge in some cases. Some inaccuracies will be inevitable as a result of the inconsistent approaches of the different workers involved. It would now be desirable for a single worker, or a few workers in collaboration, to re-assess all collections in the light of knowledge gained from the study of recent hoards,

notably the Cunetio hoard (Besly and Bland 1983). However, any inaccuracies are considered to be small and all possible precautions have been taken to avoid inconsistency of recording collections.

The approach used has been fully outlined and the data recorded can now be assessed.

Chapter 6. Gloucestershire, Avon, Wiltshire, Dorset and Somerset

The first barbarous radiate site finds to be studied come from collections in the west of the survey area. Examples from the five counties of Gloucestershire, Avon, Wiltshire, Dorset and Somerset will be presented in this chapter. This regional block comprises a large portion of south-western England. This area contained many well-known Romano-British rural settlements and villas and fieldwork has suggested that parts of the area were originally very rich in such settlements, from the latter first century AD (McWhirr 1981, 83). The coins studied here unfortunately do not represent a complete coverage of these counties. It was not possible to obtain access to all of the available coin collections but a range of site categories has been examined, mainly from older excavations, housed in museums.

A total of 1,088 site finds have been recorded from twenty-seven sites. The largest number of sites from a single county come from Wiltshire, mainly from the collection at Devizes Museum. Five of the assemblages studied below contain over one hundred barbarous radiates. Cirencester is the largest, with 498; coming from the Museum and Excavation Committee. The other sizeable collections are those from Bath, Mildenhall, Wanborough and Colliton Park, Dorchester.

In addition to the site finds, twenty-one hoards which contain barbarous radiates, in varying quantities, have been recorded from these counties. These will be considered in chapter 13 but two were made available for personal inspection and study during the course of the current project. These are the Mere (Wiltshire) hoard, of 100 barbarous radiates, and the

Meare Heath (Somerset) hoard of 1,404 antoniniani, which include 869 barbarous radiates; both of which are of importance in this research. The county of Somerset has only been included in this study because of the Meare Heath hoard and site finds from that county have not been studied, with the exception of a single find from Charlton.

Summary of the coins recorded

The number of barbarous radiates recorded is noted in brackets. Site and hoard numbers refer to the locations shown in figure 6:1.

Gloucestershire

- | | |
|-----------------------|------------------------|
| 1. Cirencester (498), | 2. Coln St Aldwyn (3). |
|-----------------------|------------------------|

Avon

- | | |
|--------------------|----------------------------|
| 3. Bath (110), | 4. Bristol (2), |
| 5. Gatcombe (6), | 6. King's Weston Park (5), |
| 7. Sea Mills (22), | Unprovenanced group (18). |

Wiltshire

- | | |
|------------------------------|-------------------------------|
| 8. Atworth (13), | 9. Berwick St James (1), |
| 10. Box House (1), | 11. Broad Hinton (1), |
| 12. Cold Kitchen Hill (18), | 13. Colerne Park (1), |
| 14. Cricklade (10), | 15. Easton Grey (4), |
| 16. Holbury Villa (6), | 17. Market Lavington (1), |
| 18. Mildenhall (128), | 19. Stockton Earthworks (2), |
| 20. Wanborough (207), | 21. Wanborough Plain (2), |
| 22. Westbury Ironworks (25), | 23. Winterbourne Bassett (1). |

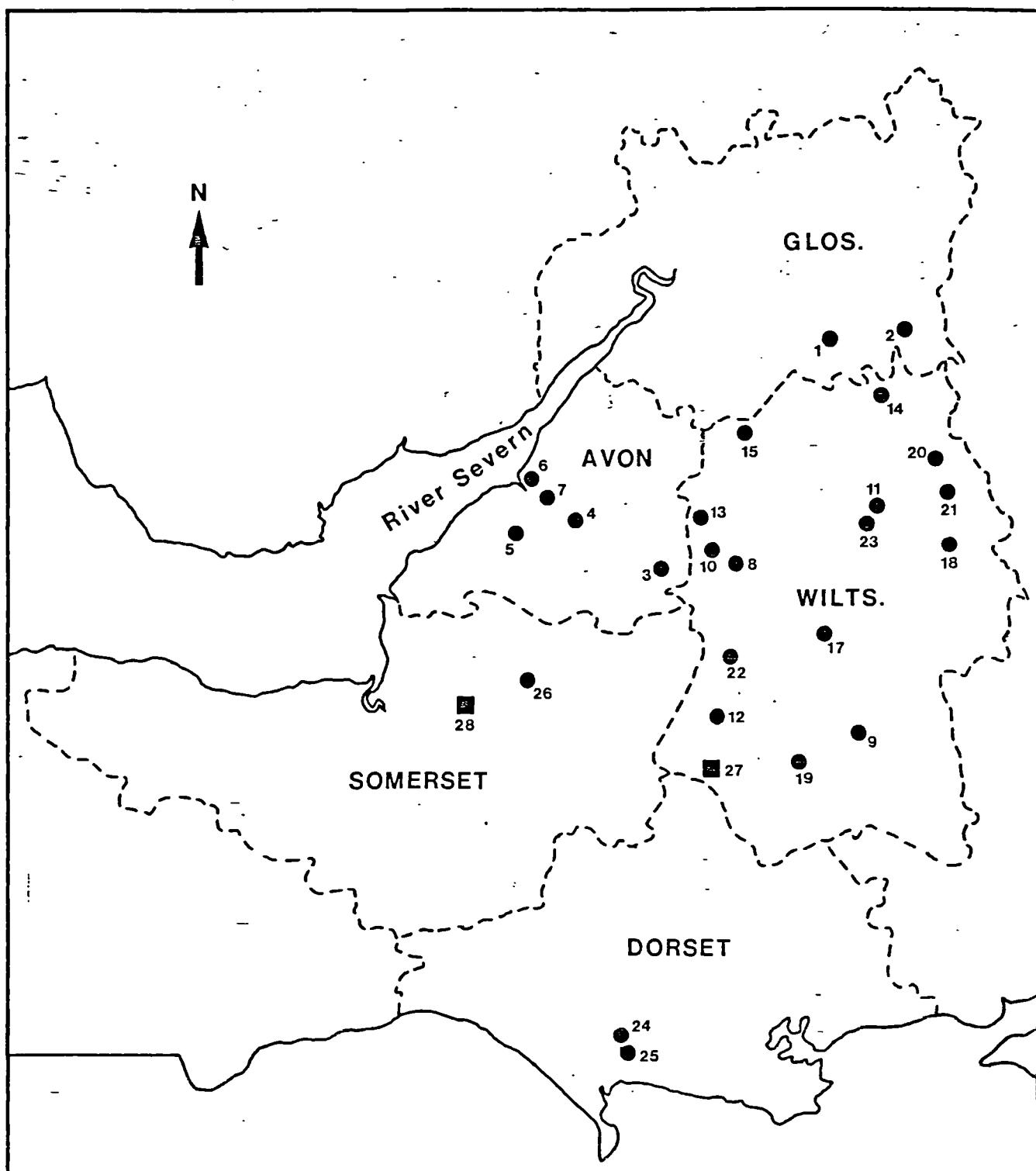


Fig.6:1 Map of sites and hoards in Avon, Wiltshire, Dorset and Somerset. Scale 1:1,000,000

Dorset

24. Colliton Park (290),

25. Dorchester (1).

Somerset

26. Charlton (1).

Hoards

Wiltshire

27. Mere Composition - 100 barbarous radiates.

Publication - Mattingly 1934.

Somerset

28. Meare Heath Composition - 385 regular antoniniani, 869
 barbarous radiates, 150 blank
 flans.

Publication - Carson and Bland 1976.

All of the sites and hoards studied are located in figure 6:1.

The data will now be presented and discussed.

Gloucestershire

Cirencester (SP 0201)

The Roman town of Cirencester (Corinium) was the civitas capital for the Dobunni. The barbarous radiates recorded from the site come from two sources; 258 are from excavations by the Cirencester Excavation Committee and 237 are from earlier excavations within the city, now housed in Cirencester Museum. The Excavation Committee coins were recovered between 1960 and 1976. Unfortunately the Museum coins nearly all lack precise

provenances within the city. These two collections have been catalogued and studied separately. It will be of interest to contrast the results from each; one representing modern excavation and the other being a more piecemeal collection. It is important to see whether the two show any degree of cohesion, uniting the assemblage as a whole. The coins have been fully catalogued in the appendix, at the end of this thesis. The composition of the collections can now be discussed.

The types present

A summary of the types present is provided in figure 6:2, with the Museum and Excavation Committee coins listed in separate columns. The Museum collection will be considered first. There are just six Central Empire types, representing 2.5% of the total. The Gallic Empire types number 218, which represent 92%. Just thirteen coins, or 5.5%, are unclassifiable.

The presence of a copy of the empress Salonina is noteworthy, as her coins are not numerous in Britain. For the Gallic Empire, the Tetrican types dominate the assemblage, with 131 (55% of the total). The most profuse categories overall are the Tetrican Pax Aug. with forty (16.9%), Spes with eighteen (7.6%) and the Tetrican Salus and Invictus of Victorinus, each with fourteen (5.9%).

Five categories in particular require some explanation. Copies of both Tetricus I and II include uncertain reverse types, which are generally badly worn and abraded, and these are quantified separately. Examples which are worn, with little or not obverse detail and a faint figure on the reverse, are also categorised separately. Female types are placed

	<u>MUSEUM</u>		<u>EXCVN. C.</u>		<u>TOTAL</u>	
CENTRAL EMPIRE	NO.	%	NO.	%	NO.	%
Gallienus	1		2		3	
Claudius II	2		4		6	
Divo Claudio - altar	2		8		10	
- eagle			4		4	
Salonina	1				1	
TOTAL CENT. EMP.	6	2.5	18	7.0	24	4.8
GALLIC EMPIRE						
Postumus	4	1.7	3	1.2	7	1.4
Victorinus						
- Invictus	14	5.9	12	4.7	26	5.3
- Pax Aug	6		2		8	
- Other	<u>17</u>		<u>6</u>		<u>23</u>	
Total Victorinus	37	15.6	20	7.8	57	11.5
Tetricus I and II						
- Fides Militum	2		3		5	
- Hilaritas Augg	4		3		7	
- Laetitia	2		2		4	
- Mars Victor	6				6	
- Pax Aug	40	16.9	28	10.9	68	13.7
- Pietas	5		7		12	
- Salus Augg	14	5.9	12	4.7	26	5.3
- Spes	18	7.6	22	8.5	40	8.1
- Victoria/Comes Aug	4		3		7	
- Virtus Augg	10		5		15	
Tet. I, uncertain rev.	18		9		27	
Tet. II, uncertain rev.	7		3		10	
Hybrid types	<u>1</u>		<u>1</u>		<u>2</u>	
Total Tetrici	131	55.3	98	38.0	229	46.3
Other types	<u>18</u>		<u>16</u>		<u>34</u>	
TOTAL GALLIC EMP.	190	80.2	137	53.1	327	66.1
Uncertain minimi	28		72		100	
Unclassifiable	<u>13</u>		<u>31</u>		<u>44</u>	
GRAND TOTAL	237		258		495	
Total minimi	64	27.0	114	44.2	178	36.0

Fig.6:2 Summary of types from Cirencester

together, while uncertain and male figurative types are also quantified together. Finally, many minims, by virtue of their size, are not easily classifiable. Some were struck from dies larger than the flans, often meaning that vital, diagnostic, details are missing from the original engraving. Most minims are also copies of earlier copies and have become more stylised, while others carry new, invented, types. It is often impossible to precisely identify the emperors or reverses originally intended. It would be possible to guess at a roughly suitable classification in many cases but such a subjective sorting would not enhance comparison of types between sites. Such coins have therefore been quantified together, separately. The minims from Cirencester Museum total sixty-four, or 27%.

The coin categories from the Excavation Committee can now be compared. The Central Empire copies account for 7% of the total, which is a significant difference from the Museum collection. Twelve of the eighteen belong to the Divo Claudio category. One significant difference overall is that these coins display greater signs of wear than the Museum collection, whose coins have undergone some degree of selection. Thirty-one, or 12%, are totally unclassifiable and many others are partly so. The totals and percentages for Gallic Empire categories, notably for Victorinus and the Tetrici, are both lower than for the Museum. The Gallic Empire total falls to 81%. However, the total of minims rises very markedly to 114, representing 44.2% and suggesting a superior recovery rate for small coins. It is noted that the favourite types represented are the same as for the previous collection, with Tetrican Pax most common, Spes second and with Salus and Victorinus' Invictus again equal third.

The summary list for this site (figure 6:2) also combines the separate collections into an overall picture for Cirencester. The figures need not be discussed again in depth but these two collections together should provide a representative sample of irregular coinage to compare with subsequent sites.

A number of coins betray the methods of manufacture employed by irregular moneyers. Several, though worn, can be seen to possess square-shaped flans, as in Plate 6:2, 20. Such types tend to carry cruder engravings, as shown in Plate 6:1, 28, which lacks legend and shows a very basic engraving technique. Square flans were prepared from sheet metal, by cutting a rough coin shape with shears. On some examples, rough edges left by the cutting are still visible and examples will be illustrated from other sites. These very basic flans were then die-struck. Other roughly prepared flans are illustrated in Plate 6:1, 8 and 9. Number 8 is 'droplet' shaped, while number 9 shows a slight variation in this shape. The 'droplet' is encountered regularly among minims, where a blob of metal was struck with a die, with no attempt to produce a circular flan by trimming the edges.

The more interesting types present within the two collections will now be discussed. Some interesting types of barbarous radiate, not commonly recorded, are present in small numbers. The Central Empire derivatives will be studied first.

Just three Gallienus copies have been recorded from Cirencester. All of these are crude and are illustrated in Plate 6:1, 29-30 and Plate 6:2, 18. Plate 6:1, 29 carries a reasonable obverse but the reverse shows a long, thin animal type, with pin-legs. Number 30 has a similar reverse, with a

sausage-shaped animal, this time walking right. On this example the portrait is much cruder, with angular nose and chin and dotted beard. Another coin, this time a Victorinus copy with an Invictus reverse, shown in Plate 6:1, 31, has similar facial characteristics, notably the beard comprising three rows of large dots. The final Gallienus derivative is shown in Plate 6:2, 18. This minim is a very simple, stylised coin, with an unidentifiable horned animal reverse. Definite examples of the empress Salonina have not previously been recorded. The example present at Cirencester Museum is catalogue number 2; derived from RIC 5:4.

The Consecratio altar, as with the regular coinage, is more common among copies than the eagle type. This is also the case at Cirencester. Most Consecratio issues tend to be good copies, although the well-known and simple reverses did provide scope for stylisation. On Plate 6:2, 19, an example of the altar is shown, where the altar has been almost lost in a design.

Imitations of Postumus' coinage again tend to be good, accurate copies; often very close to their prototypes. Such copies were present in the Cunetio hoard (Besly and Bland 1983). Postumus copies are rarely recorded from sites in Britain. Seven examples have been recorded from Cirencester. Five of these are of large module and have strong, bold, obverse engravings. The two others have small pointed features and share the Pax Aug reverse. Plate 6:1, 1 shows the reverse of a very worn Postumus type, depicting a club, cylindrical quiver and bow, from the Herculi Romano Aug issue (RIC 5:291). The bold and rotund features seen on numbers 2-4 on Plate 6:1 are shared by a Tetrican copy on Plate 6:1, 5. This is particularly similar in style to number 2.

A trend towards a simplification of types and towards stylisation can be seen in barbarous radiate engravings. It is therefore interesting to note the presence of field marks in the Cirencester coins. These occur specifically in the coinage of Victorinus, in the Invictus and Pax Aug types. These examples have been recorded in the catalogue and one example is illustrated on Plate 6:2, 7, showing the field mark 'V'.

A number of other examples warrant individual attention in this first assemblage to be discussed in depth. Collectively, they serve to illustrate the degree of variability to be found within a single British site collection. Individually, these examples represent interesting derivations from the official coinage.

Plate 6:2, 3 shows a very degraded copy, with illiterate obverse legend and large flan. The face is reduced to a triangular shape, surrounding a large dot for the eye. The reverse carries a large linear figure, holding a staff, right. Another large diameter copy (Plate 6:2, 4) carries an equally grotesque reverse figure, but of very different style. Spiked rays surround the head, as if Sol is being represented, although the figure remains static in pose. The legend -ICTO- may be a derivation of Invictus. Plate 6:2, 8 is a copy of Pax Aug, of Tetricus I, although the obverse portrait is unrecognisable, displaying an unusual beard style. Another Tetrican copy is shown in Plate 6:2, 14. The reverse shows an unrecognisable figure with arms curled outwards. A pronounced border is employed on both faces, but no legend.

The examples illustrated in Plate 6:2, 9 and 10, show very crude obverse portraits, barely recognisable as human faces. Copies of Victorinus are shown in Plate 6:2, 11 (with a

Tetrican Laetitia reverse), and 12-13 (both Invictus). Plate 6:2, 16 (Spes) and 17 (Victorinus Aug) show how scratchy and degraded these copies could become. Unusual Tetrican busts are illustrated in Plate 6:2, 15 and 21. The features of a pronounced dotted border, angular portraiture and absence of legends recur at Cirencester, although the coins in question cannot usually be associated by overall style. Such features are carried by those examples shown in Plate 6:2, 20, 24 and 25; the latter two carry Mars reverses. Other examples illustrated are Plate 6:2, 26 (Mars) and 27 (Spes), both of which exhibit a similarity of engraving technique.

Die- and style-linking

Ten of the Victorinus copies, and two other coins, share characteristics in their portraiture and have been grouped together as potentially coming from the same irregular mint. These are shown in Plate 6:1, 10-21. These twelve examples are characterised by a crescent-shaped face and beard, with the latter comprising many small dots. The flans are large, averaging 17 mm in diameter. The examples shown in Plate 6:1, 12 and 15, are particularly close. Numbers 20 and 21 have been assigned to Tetricus I, and not to Victorinus, because of their legends. However, it is possible that the portraits were intended to represent Victorinus.

Two distinctive minims bear good obverse engravings of Claudius II. Plate 6:2, 1 is an Excavation Committee coin and number 2 is a Museum coin. Despite their high quality portraits, they differ subtly from official engravings, with slightly more pointed features than their regular counterparts. Both examples lack legends on either face and possess non-figurative reverses. The obverses do not die-link. Both

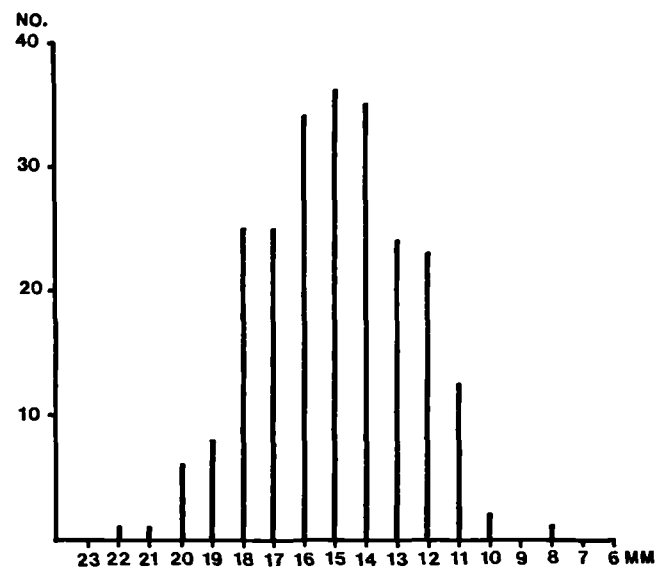
employ well-rounded flans of precisely 12 mm diameter. These appear to be products of a common irregular mint.

Other coins present belong to die- and style-groups identified by H.B. Mattingly. Five can be associated with Professor Mattingly's Invictus/sacrificial implements group, described in chapter 4 as group B (see also figure 4:1). The best example present is illustrated in Plate 6:1, 23. It is a large example, at 16 mm diameter, but has the 'classic' V-shaped neck and the reverse carries the representation of a ewer, with enlarged handle, and with subsidiary implements omitted. Four other Cirencester coins share similarities with this group but their overall style is distinct. Three examples (Plate 6:1, 22, 25 and 26), have pointed faces and similarity of style. Numbers 22 and 26 lack legends, while 25 has a dashed obverse legend. They are smaller than number 23. They can be considered to be a sub-group, derived from Mattingly's main group. Plate 6:1, 24 has been presented because it shares the characteristics seen in the previous coins - with similar size, no legend and simple angular obverse engraving. It is illustrated for comparison and may turn out to be part of a wider group sharing these characteristics.

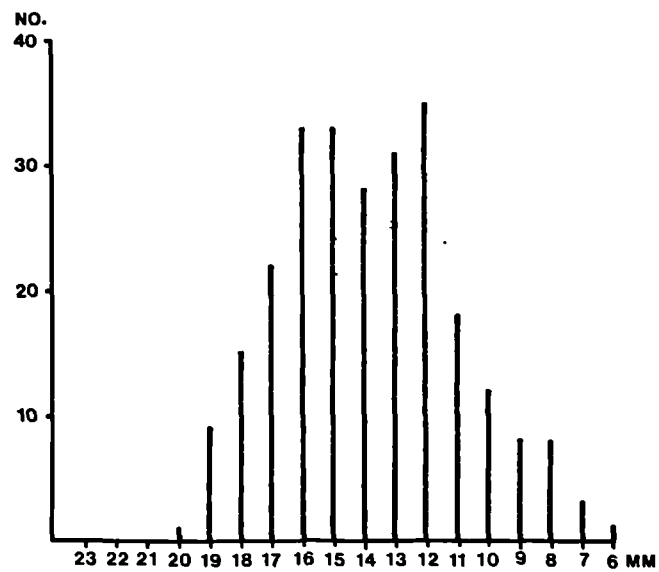
One other coin is part of a die-group identified by H.B. Mattingly in the Worthing hoard (Lewis and Mattingly 1964), which carry the reverse Pax Aug (group A in chapter 4; figure 4:1). The Worthing hoard contains fourteen such coins and the Cirencester example is illustrated in Plate 6:1, 27.

The sizes of the coins

The sizes of the Cirencester barbarous radiates range from an upper limit of 22 mm, which is in common with larger regular



Cirencester Museum



Cirencester Excavns

Fig.6:3 Coin diameters: Cirencester

issues (figures 3:2, 7), down to just 6 mm. The diameters of both the Museum and the Excavation Committee coins have been compiled and are shown in figure 6:3.

The Museum coin diameters form a bell-shaped graph, between the extremes of 22 mm and 10 mm; with none at 9 mm and a single example at 8 mm. The vast majority, comprising 92%, fall between 18 mm and 11 mm, inclusive. There is a peak at 15 mm. Twenty-seven per cent are classifiable as minims (13 mm or under). In the case of the Excavation Committee coins the spread is different. The largest coin is just 20 mm. The pattern is not a strict bell-shape; with no curved top and a tailing-off at the lower end, from 11 mm to 6 mm. The majority are again found within the limits of 18 mm and 11 mm, but this time the value is less, at 84%. A much larger portion of the Excavation Committee coins are minims, with 44% at 13 mm below. There is no single peak, with similar numbers spread between the values of 16 mm to 12 mm.

Almost half of the Excavation Committee coins are, or approach, minim size. This indicates a high recovery rate. Comparison of the two graphs from the same city indicate that the Museum collection is not totally representative of all barbarous radiate types in use locally and that there is a bias away from the smallest types. Certainly, the Museum coins are better preserved, in general, and this would suggest that they have undergone some degree of selection. The Excavation Committee coins exhibit more wear.

The diameters of the smallest examples present at Cirencester serve to illustrate an observation made about this coinage in general. Minims which circulated in Britain in the fourth century are quite commonly found below the size of the smallest recorded here. Imitations of Fel Temp Reparatio,

Fallen Horsemen, issues (of AD 354-64) and, less commonly, of Gloria Exercitus issues (of AD 341-6), have often been recorded by this writer as just 4 mm diameter. The smallest clear examples of barbarous radiates encountered in all collections do not fall below 6 mm.

Die-axes

The die-axes of barbarous radiates have not been the subject of any previous study. Whenever mentioned, they have been assumed to have been arbitrary. It is possible here to examine this aspect of a large site assemblage. It would certainly be desirable to undertake such a study in relation to extensive die-groups, representing coins from the same mint. It is difficult to look for order within an assemblage containing coins struck over a broad time range, of great stylistic and size variation, which emanated from an unknown number of mints. However, in the absence of any die-links, it has still been considered worthwhile to investigate and document this aspect, in the case of at least one major collection.

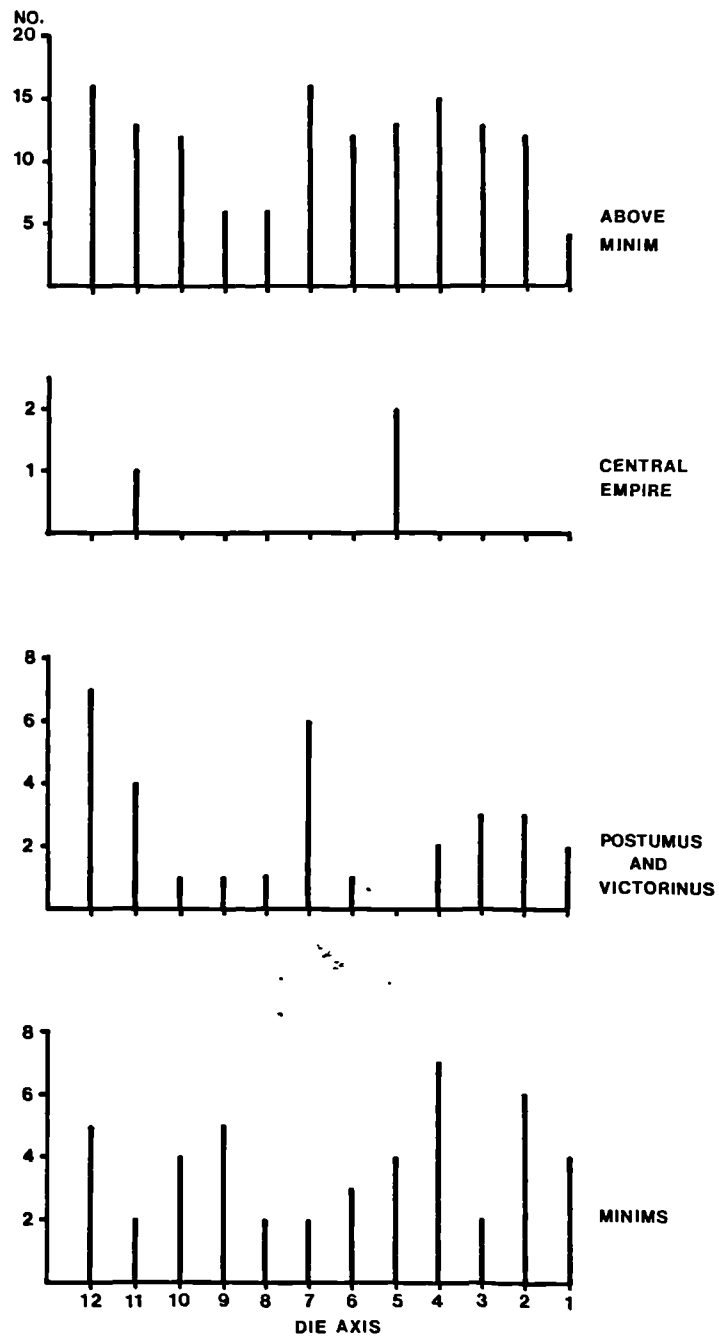
The die-axes of all coins studied are recorded in the catalogue, at the end of the thesis. They have been recorded as numbers from 1-12, relating to the numbers on a clock face. The situation for Cirencester has been summarised in figure 6:4, as recorded from particular groups of coins. The coin numbers relating to the different die-axes have been recorded on graphs, in figures 6:5 and 6:6, representing the separate Museum and Excavation Committee collections, respectively.

In the absence of die-links, coins sharing common features have been considered together. The first graph in each of figures 6:5 and 6:6 shows the results from all coins present

<u>CIRENCESTER MUSEUM</u>				
<u>O'CLOCK</u>	ABOVE MINIM SIZE	CENT. EMP. ABOVE MINIM	POSTUMUS AND VICTORINUS	MINIMS
12	16		7	5
11	13	1	4	2
10	12	1	1	4
9	6		1	5
8	6		1	2
7	16		6	2
6	12		1	3
5	13	2		4
4	15		2	7
3	13		3	2
2	12		3	6
1	4		2	4
COIN TOTAL	<u>138</u>	<u>3</u>	<u>31</u>	<u>46</u>

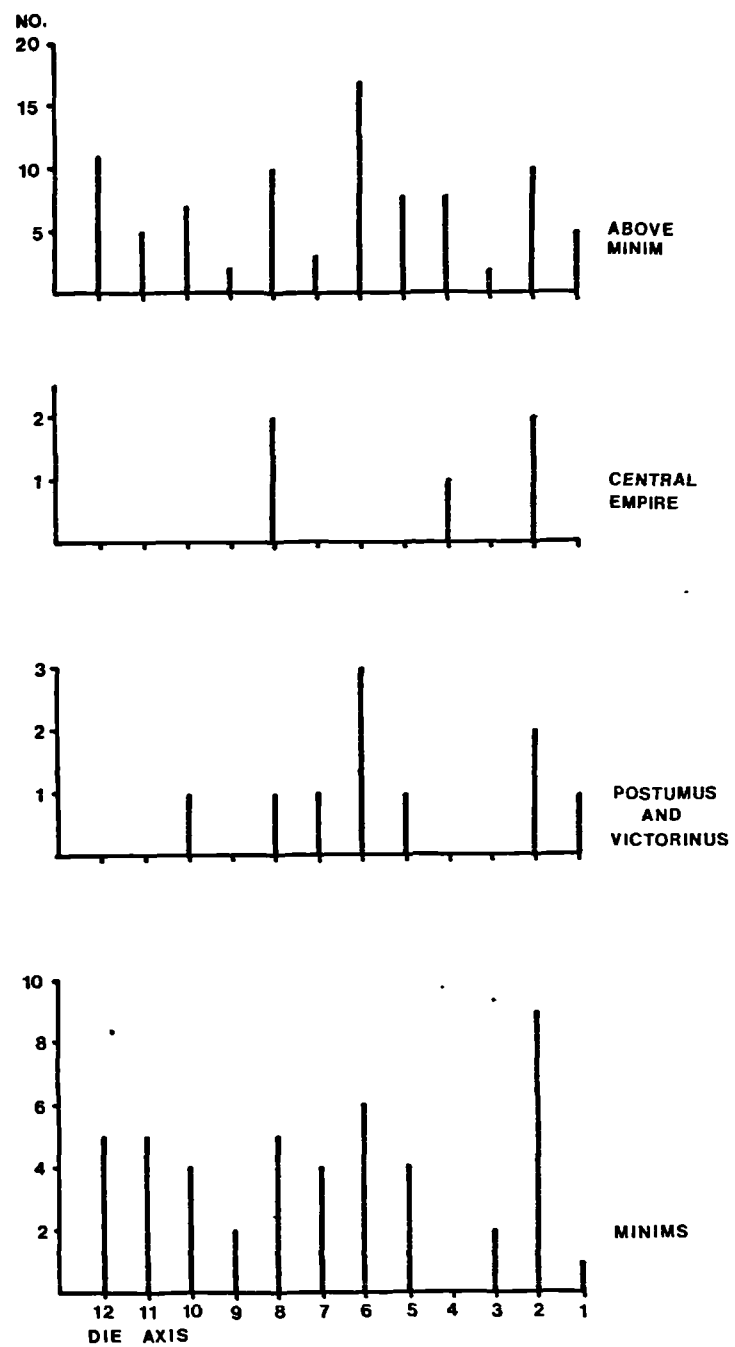
<u>CIRENCESTER EXCAVATION COMMITTEE</u>				
<u>O'CLOCK</u>	ABOVE MINIM SIZE	CENT. EMP. ABOVE MINIM	POSTUMUS AND VICTORINUS	MINIMS
12	11			5
11	5			5
10	7		1	4
9	2			2
8	10	2	1	5
7	3		1	4
6	17		3	6
5	8		1	4
4	8	1		
3	2			2
2	10	2	2	9
1	5		1	1
COIN TOTAL	<u>88</u>	<u>5</u>	<u>10</u>	<u>47</u>

Fig.6:4 Table of die-axes: Cirencester



Cirencester Museum

Fig.6:5 Die-axes: Cirencester Museum



Cirencester Excavations

Fig.6:6 Die-axes: Cirencester Excavations

above minim size. If a controlled alignment is to be seen, it should show by a large count around the readings of 12 and 6. There is no such pattern of consistent alignment to be interpreted among the assemblage as a whole, in figure 6:5. In figure 6:6, however, there are peaks at 6 and 12, suggesting that some of the coins within the assemblage were being correctly aligned.

In both figures the combined Central Empire coins were also recorded. In 6:5, this did produce a positive alignment, although the coin total was just three. In 6:6, the larger sample does not support such a clear alignment.

The Tetrican imitations from Cirencester were so numerous and contained so many diverse styles and sizes that it was not considered useful to study these alone. The better-engraved Postumus and Victorinus copies, of larger module, provided a better opportunity for testing what were possibly the earlier copies. In figure 6:5, these coins show peaks at 12 and 7, while in figure 6:6 it is at the alignment of 6.

The final graph in each figure shows the values recorded for all minims; the latest phase of barbarous radiates. It can be seen that these alignments are totally arbitrary in both cases. Peaks appear in the wrong places.

Although the majority of barbarous radiates clearly had arbitrary die-axes, it is considered possible from this evidence that some attempt was made at alignment among some of the earlier imitations. The impression gained is of less precision over time. The results shown here are not as good as could be obtained from the study of die-linked groups of coins. The suggestion that some order may have existed must now be followed-up when suitable data does become available for study in the future.

Conclusions

No examples of internal die-linking were found within this collection. At this stage of the overall study it is not possible to consider the question of die- or style-links to other sites. Such linking will be considered in subsequent sections, when other collections have been compared and when the appropriate coins have been identified. Instances of external linking, with die- and style-groups identified by H.B.Mattingly, were outlined above. The coins involved are as follows:-

1. Plate 6:1, 23 (catalogue no.84 - Excavation), with the Invictus/ewer group.
2. Plate 6:1, 22, 25, 26 (catalogue nos.195-6 - Museum; 47 - Excavation). Types related to the Invictus/ewer group - a derivative group.
3. Plate 6:1, 27 (catalogue no.4 - Museum). A member of the Worthing hoard Pax Aug group.

In addition, other coins have been grouped together, based on similarity of type and style. These can now be summarised.

1. Gallienus copies. Three very crude engravings, with distinctive beard and animal reverse. Plate 6:1, 29-31 (catalogue nos.1, 29 - Museum; 1 - Excavation).
2. Postumus copies. Two coins with similar portraits. Plate 6:1, 6-7 (catalogue no.10 - Museum; 21 - Excavation).
3. Victorinus and Tetricus I copies. Twelve coins with similar obverse portraiture and size. Plate 6:1, 10-21 (catalogue nos.22-25, 33, 144-5 - Museum; 22-5, 102 - Excavation).
4. Claudius II copies. Two minims with similar obverse

portraits. Plate 6:2, 1-2 (catalogue nos.3 - Museum; 6 - Excavation).

5. Mars reverse types. They carry a border and no legend.

Plate 6:2, 24-5 (catalogue nos.58-9 - Museum).

6. Tetricus I copies. Two coins with similar obverse portraits. Plate 6:2, 5-6 (catalogue nos.82 - Museum; 77 - Excavation).

These groups are tentatively put forward as betraying some stylistic similarity. It is noted that they associate coins from both the Museum and Excavation Committee. However, the overwhelming picture obtained from the Cirencester coins is one lacking in closeness of style. The diversity of engravings, sizes and styles has been surprising. It can be clearly seen that no single mint was supplying the coin for Cirencester. The identification of a limited degree of stylistic similarity may reflect some local minting in this area. The presence of types associated with groups established by H.B.Mattingly serves to emphasise the wide circulation of these coins, as has been interpreted from hoard studies (Mattingly 1963; Lewis and Mattingly 1964).

Other Gloucestershire finds

The only other site finds to have been recorded from Gloucestershire have been those from Coln St Aldwyn; a village some ten miles east of Cirencester. These three coins are all illustrated at the bottom of Plate 6:3 (1a-3a). 1a is a minim, whose flan was clearly prepared by clipping, as evidenced by an angled edge. 3a is an example of an inadequate sized flan having been used. Part of the die-impression is missing from each face.

Five hoards which contain barbarous radiates have been recorded from Gloucestershire. None of these have been recorded at first hand and they will be considered along with other British hoards in chapter 13.

Avon

Bath (ST 7464)

Bath, the Roman town of Aquae Sulis, was situated at the crossing point of the Fosse Way and the River Avon. The site had good communications, which were an important feature of the development of the settlement, and a number of roads converged there (Cunliffe 1969). The town had a size of some 23 acres and was walled. The assemblage studied here comes from the excavation of the Roman spring by Professor Cunliffe in 1979 (Cunliffe 1980 and 1983). The coins do not represent casual loss at the town but come from a special votive context, in a restricted part of the bath and temple complex. These coins were thrown into the waters as offerings to the goddess Sulis Minerva and it is possible to detect a positive selection of types for this function (Cunliffe 1980, 200). Although most coins recovered from the spring were of bronze, an appreciable number were silver and, occasionally, gold. These offerings accompanied other objects intended for the deity, including pewter curses. The rarity value of some of the coins present, which included types rarely lost via the process of casual loss on other sites, would indicate a selection of types for offering.

Although a precise figure for the total of coins from the excavation is not available at the time of writing, the number

has been estimated at between 12-17,000, which covers the entire duration of the Roman occupation of Britain. The barbarous radiates were recorded prior to the completion of sorting of the whole assemblage and the listing achieved may not be exhaustive, although it is not expected to be far removed from the eventual total. The number recovered, just 110, is a very small proportion of the total indeed and represents less than one percent. The percentage of barbarous radiates found on Romano-British sites, as a result of casual loss, normally falls within the range 5% - 35% of the total (personal inspection of collections by the writer). The technique of sieving was employed and the very smallest objects from the spring were recovered. It appears that the unusual composition of the assemblage is a result of the selection of votive offerings.

It is disappointing that the action of the spring waters have not been kind to many of the coins. Most of the barbarous radiates exhibit signs of corrosion, pitted surfaces and absence of detail. The group, as a whole, is no better preserved than an ordinary site assemblage.

The types present

The ratio of Central Empire to Gallic Empire coins recorded in this assemblage is very different to that from Cirencester, above. The percentage of Central Empire coins is much higher, at over 26%. However, the distribution of types within the major categories is similar to that seen at Cirencester. The Divo Claudio issues predominate for the Central Empire, while Pax Aug., Spes, Salus and Hilaritas are most numerous within the Gallic Empire category, under the Tetrici. The Invictus type again predominates under Victorinus. The Gallic Empire coin

accounts for 70% of the total, as opposed to 86% at Cirencester, but the proportion of Tetrican types is higher and Victorinus types lower. A summary of the Bath coin categories is provided in figure 6:7. Coins of special interest are illustrated in Plate 6:3 and are discussed below, along with other noteworthy examples.

Plate 6:3, 1 is a very crude Gallienus copy, with a Virtus Aug reverse. Most of the Central Empire imitations from this collection are close, well-engraved, types. Just one of the Claudius II examples is of comparable crudeness, as shown in Plate 6:3, 15. The Divo Claudio types are all good copies except for the only minim of this type (Plate 6:3, 18). One copy of Aurelianus is present and is a close copy, with just slight weakness of engraving (catalogue number 29).

All Invictus examples present have been illustrated (Plate 6:3, 2-4). In no single case would the obverse be recognised as Victorinus. Number 4 shows a slight similarity to Mattingly's Invictus/ewer group, especially on the obverse. One Hilaritas (Plate 6:3, 5) and five Pax Aug examples have been illustrated and these show distinctive features. These Gallic Empire types, as a whole, do not include the very crude copies seen at other sites. One lone exception, on Plate 6:3, 9, shows a reversed figure of Pax, with exaggerated limbs. The presence of a copy of Tetricus II's Princ Ivvent is noted because it was seldom reproduced among barbarous radiates. Interesting versions of Salus Augg and Virtus Augg are illustrated in Plate 6:3, 11-12. The former has a similar portrait to a coin in the St Mard I hoard (Lallemant and Thirion 1970, no.4485). The reverse engraving styles are very different.

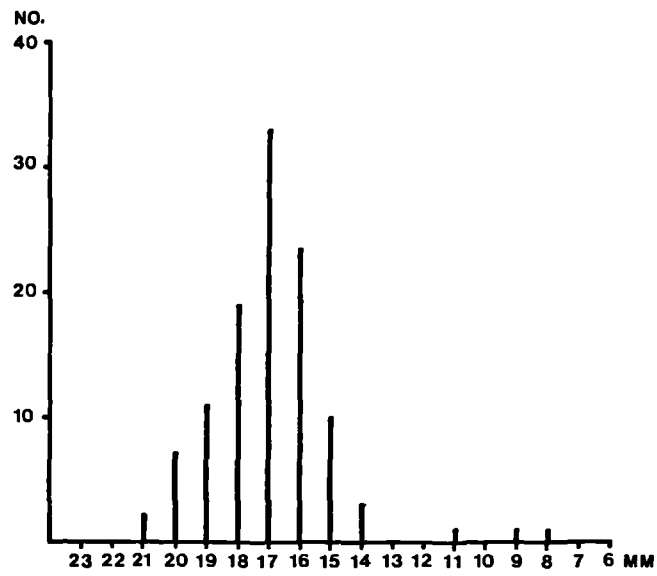
CENTRAL EMPIRE	NO.	%
Gallienus	2	
Claudius II	8	
Divo Claudio - altar	10	9.1
- eagle	8	
Aurelian	1	
TOTAL CENT. EMP.	29	26.4
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	3	2.7
- Pax Aug		
- Other	<u>2</u>	
Total Victorinus	5	4.5
Tetricus I and II		
- Fides Militum	2	
- Hilaritas Augg	5	4.5
- Laetitia	2	
- Princ Ivvent	1	
- Pax Aug	22	20.0
- Pietas	2	
- Salus Augg	5	4.5
- Spes	11	10.0
- Victoria/Comes Aug	1	
- Virtus Augg	4	3.6
Tet. I, uncertain rev.	7	
Tet. II, uncertain rev.	2	
Hybrid form	<u>1</u>	
Total Tetrici	65	59.1
Other types	<u>5</u>	
TOTAL GALLIC EMP.	75	68.2
Uncertain minimi	2	
Unclassifiable	<u>4</u>	
GRAND TOTAL	110	
Total minimi	3	2.7

Fig.6:7 Summary of types from Bath

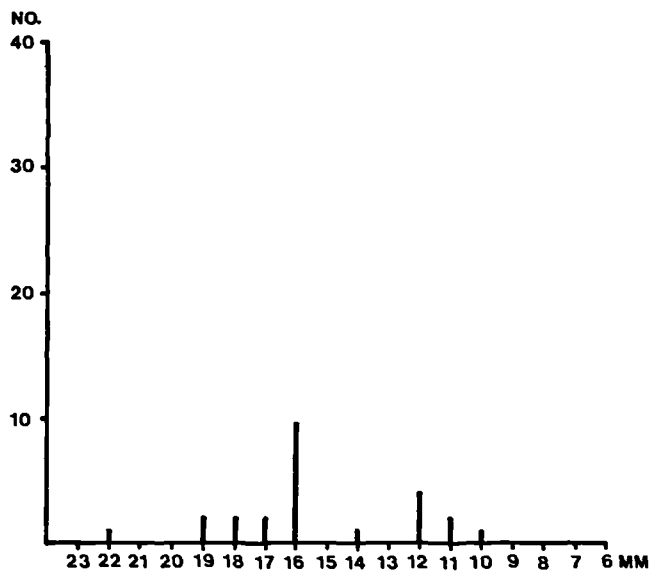
Plate 6:3, 13 is a copy of Tetricus I, but the reverse figure of Providentia, as used by Victorinus and Postumus. The version in question is closer to the form employed by Postumus. Plate 6:3, 14, 16 and 17 show Tetrican copies whose reverses have become so stylised that their derivation is unclear. Number 14 is very large for such a derivative and portrays a male figure with a sceptre to the left, possibly derived from Virtus Aug. Numbers 16 and 17 contain similarly elongated portraits, scratchy engravings and similar fragments of Tetrican legend. Both reverses contain a figure holding a transverse staff and may be based on the figure of Mars Victor. Of all the barbarous radiates from Bath, it is only these two which possess any similarity, albeit not very close ones. The total absence of any close internal style-linking, external linking or any die-linking is noted within this assemblage. The generally high standard of engraving for barbarous radiates is present right across the collection.

The sizes and weights of the coins

The diameters of the Bath coins are recorded in figure 6:8. They are shown to be of a very restricted size range, falling almost completely within the extremes of 21 mm and 14 mm and with a central peak at 17 mm. Isolated examples occur at 11 mm, 9 mm and 8 mm. When Figure 6:8 is compared with the corresponding figure 6:3 for Cirencester, the Bath coins can be seen to represent the larger end of the diameter range. The barbarous radiates present generally approach the size of regular Gallic Empire antoniniani (figures 3:2-4), to the exclusion of minims. In view of the good recovery techniques employed, it is clear that only larger imitations were being thrown into the spring as offerings, and not the smaller or



Bath



Sea Mills

Fig.6:8 Coin diameters: Bath and Sea Mills

p.crer imitations.

These barbarous radiates have also been weighed. All weights have been recorded in the catalogue. In order to test for the presence of any weight/size standard it was necessary to compare examples of similar type (in the absence of die-linked coins). The only category present of adequate size was considered to be that of all Tetrican copies, above minim size. The sizes and weights of all such examples present at Bath have been plotted in figure 6:9, which clearly shows that no size or weight standard was being adhered to. The range of weights recorded against each coin size is very wide, with no clustering between the extreme values at all. In fact the degree of diversity recorded within such a small collection is in itself surprising.

Die-axes

The die-axes of the Bath coins have been recorded in groups, based on similar categories, in a similar way to that employed for Cirencester. The data is presented in figure 6:10 and the results are shown graphically in figure 6:11. More order is seen within the collection than was the case at Cirencester.

The most surprising result was obtained where all coins above minim size show a positive alignment preference at the values 6 and 12. The same pattern is seen within the Central Empire, Victorinus and Tetrican groups, while among the Divo Claudio category a general cluster is observed around 7 and 5.

It has been suggested that the Bath barbarous radiates are predominantly the larger, better, copies. It can be seen from this information that such copies exhibit a definite preference for an alignment of die-axes.

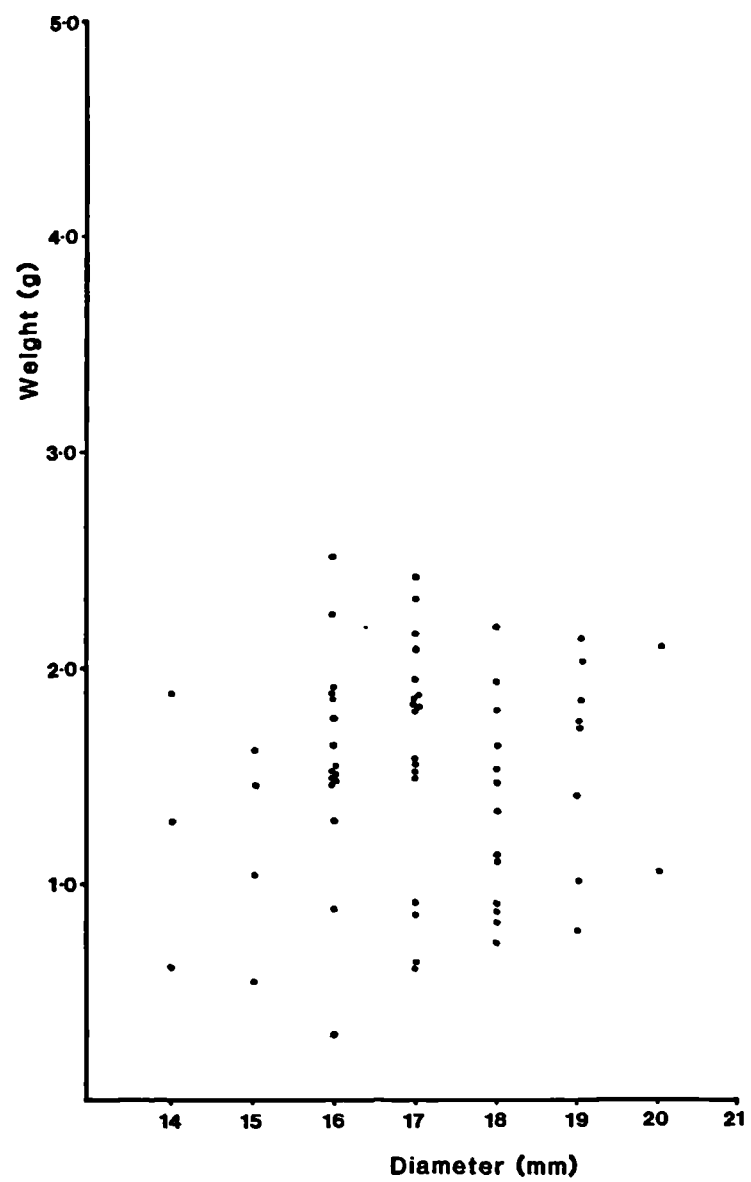


Fig.6:9 Weights of Tetrican copies from Bath

<u>O'CLOCK</u>	<u>BATH</u>				
	ABOVE MINIM SIZE	CENT. EMP. ABOVE MINIM	DIVO CLAUDIO ABOVE MINIM	VICTORINUS ABOVE MINIM	TETRICUS I & II ABOVE MINIM
12	12	3		2	10
11	10	1	1		5
10	2				2
9					
8	1	2			
7	13	6	3		6
6	23	7	2	1	14
5	12	1	1	1	10
4	6				5
3	2				1
2	4	2			1
1	10	5	2	1	3
COIN TOTAL	<u>95</u>	<u>27</u>	<u>9</u>	<u>5</u>	<u>57</u>

Fig.6:10 Table of die-axes: Bath

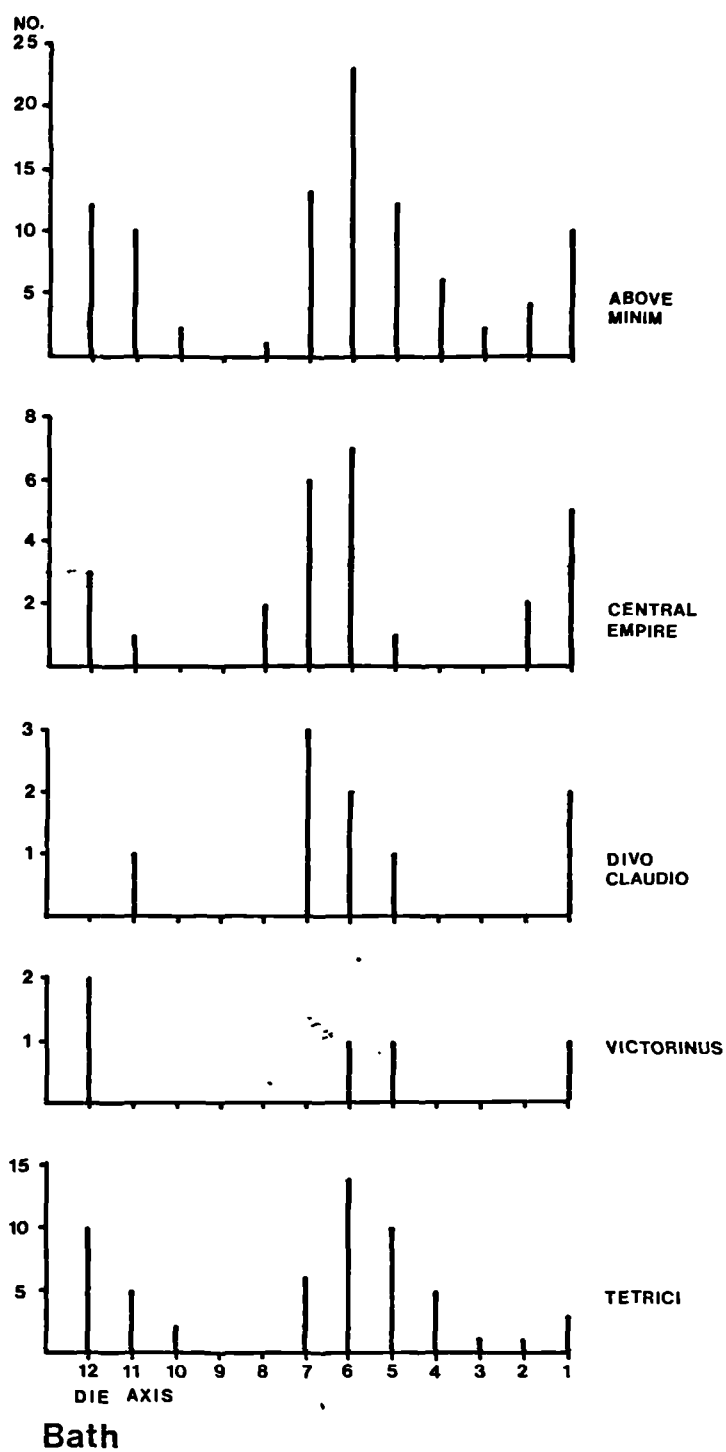


Fig.6:11 Die-axes: Bath

Conclusions

The barbarous radiates recorded from the spring comprise a collection with different characteristics to that encountered at Cirencester. There is a complete absence of die- and style-linking. The coins present are larger and better engraved than would be seen within a typical Romano-British site collection of casually lost examples. The barbarous radiates as a whole form a very small proportion of the complete Roman coin assemblage. There is a clear bias away from poorer examples, which are so prolific on other sites; and against barbarous radiates in general, for the purposes of votive offerings. The coins studied here have undergone a selection process and cannot be considered representative of the barbarous radiates used in circulation at this site. They may represent better examples from the purses of travellers to the Temple of Sulis Minerva, from many miles distant.

Sea Mills (ST 5575)

Twenty-two barbarous radiates have been examined from the Roman supply base of Sea Mills (Abona), which was situated near the mouth of the River Avon, adjacent to the Severn Estuary. These come from excavations by Boon (Boon 1945) and from recovery during the years 1921-2.

The breakdown of types present is given in figure 6:12. Despite the huge discrepancy in numbers with the Cirencester collection, the composition shown is very similar, with similar categories predominating and with almost identical percentages, in some cases. One exception is the higher percentage of Central Empire types, although just three coins are in question. Pax Aug of Tetricus I is the most numerous category

CENTRAL EMPIRE	NO.	%
Gallienus		
Claudius II	2	
Divo Claudio - altar	1	
- eagle		
TOTAL CENT. EMP.	3	13.6
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	1	
- Pax Aug		
- Other		
Total Victorinus	1	4.5
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg		
- Laetitia		
- Mars Victor		
- Pax Aug	4	18.2
- Pietas	2	9.1
- Salus Augg	1	4.5
- Spes	3	13.6
- Victoria/Comes Aug		
- Virtus Augg	2	9.1
Tet. I, uncertain rev.		
Tet. II, uncertain rev.		
Total Tetrici	12	54.5
Other types	1	
TOTAL GALLIC EMP.	14	63.6
Uncertain minimi	4	
Unclassifiable	1	
GRAND TOTAL	22	
Total minimi	7	31.8

Fig.6:12 Summary of types from Sea Mills

(with 18.2%), as it was at Cirencester (13.7%). This is followed by Spes (13.6%), again as at Cirencester (8.1%). The percentage of Tetrican copies amounts to 54.5%, compared with 46.3% at Cirencester. The minimi comprise 31.8%, which is very similar to the Cirencester figure of 36.0%.

Eight examples from Sea Mills have been illustrated on Plate 6:4. Numbers 5 and 6 are types of Claudius II, with interesting portrait derivations. The reverse of number 7 shows a male figure striding right. It is considered that this is a derivative of the Tetrican Spes. Number 8 is an unusual version of Irvictus, depicted in a detailed but inaccurate manner. Four imitations of Tetricus II are shown (numbers 1-4). These all possess large portraits, with flattened features.

The range of sizes is shown graphically in figure 6:8. The spread is more like Cirencester than Bath, with values ranging from 22 mm to 10 mm. The coins are too few to form a substantial bell-shape but they peak at 16 mm, with a lesser peak at 12 mm.

Other Avon sites

Six barbarous radiates have been recorded from the 1966 excavations at Gatcombe. Three are illustrated in Plate 6:4, 9-11. Number 9 is of particular interest, showing some stylistic similarity to the copies of Tetricus II illustrated from Sea Mills (Plate 6:4, 1-4).

Five barbarous radiates have been catalogued from the site of King's Weston Park Villa, excavated by Boon between 1948-50. Just one coin has been illustrated (Plate 6:4, 12), which is a minim, with pronounced linear engraving. No linking has been

found with previous site collection studied above.

Two copies from Bristol, both from a private collection, have been catalogued and are illustrated in Plate 6:4, 30-1.

An unprovenanced deposit from Avon

Unprovenanced barbarous radiates are present in most museum collections. These generally have not been included in the current study, unless there is a specific reason for doing so. In most cases they do not contribute to the overall study of the distribution of types in the south of England. One group of unprovenanced minimis was recorded at Bristol City Museum, which may eventually be found to relate to another local collection. This group of eighteen copies seems certain to have come from a local hoard. They were donated to the Museum as a lot but precise details of their origin could not be traced in the time available.

The group contains sixteen examples between the sizes of 12 mm and 8 mm, together with two larger examples. All are illustrated in Plate 6:4. The larger copies are seen to be in the same 'minim tradition' stylistically, despite their bigger flans. Where identifiable, these are all based on Gallic Empire types; either Victorinus' Invictus or the Tetrican Pietas or Salus.

Many hoards containing minimi have been found in the west of Britain, including those from Whitchurch in Avon (Sutherland 1935), Mere in Wiltshire (Sutherland 1934) and Meare Heath in Somerset (this chapter). More details of these hoards and fuller analysis will be provided in chapter 13.

Wiltshire

Mildenhall (SU 2069)

The Roman town of Mildenhall (Cunetio) was located on the southern edge of the Marlborough Downs. It was linked by road to the towns of Bath and Warborough. The barbarous radiates studied come from the remnants of a Roman coin collection which belonged to the Reverend Soames and which is now housed at Devizes Museum. The cream of the original collection was sent to Sotheby's for auction but the poorer coins, of less intrinsic value and of low interest to collectors, was kept. It is uncertain just how many of the barbarous radiates were dispersed from the original group from this site. The likelihood is that this element of the site assemblage remained largely intact, although the results of any quantitative study of this group must be treated with caution.

The types present

A summary list of the barbarous radiates categories is provided in figure 6:13. The initial feature of this collection is the excessive amount of wear visible on all of the coins, which has severely hindered the identification process.

A summary list of types present shows close similarity to the sites of Cirencester and Sea Mills. Central Empire types represent 8.7%, with Divo Claudio examples dominant. Victorinus types account for 3.2% and definite Tetrican types amount to 34.9%. The total Gallic Empire component stands at 79.4%. Minimi account for 42.1%, which is the highest percentage recorded so far for a site.

Seventeen examples are illustrated on Plate 6:5, and these are mainly Gallic Empire types. Numbers 1 and 2 are small copies of Invictus, both lacking obverse and reverse legends.

CENTRAL EMPIRE	NO.	%
Gallienus	1	
Claudius II	1	
Divo Claudio - altar	7	5.6
- eagle	2	
TOTAL CENT. EMP.	11	
GALLIC EMPIRE		
Postumus	1	
Victorinus		
- Invictus	3	
- Pax Aug		
- Other	<u>1</u>	
Total Victorinus	4	3.2
Tetricus I and II		
- Fides Militum	2	
- Hilaritas Augg/Laetitia hybrid	1	
- Laetitia		
- Mars Victor		
- Pax Aug	8	6.3
- Pietas	4	
- Salus Augg	2	
- Spes	8	6.3
- Victoria/Comes Aug	1	
- Virtus Augg	3	
Tet. I, uncertain rev.	14	
Tet. II, uncertain rev.	<u>1</u>	
Total Tetrici	44	34.9
Other types	<u>12</u>	
TOTAL GALLIC EMP.	61	48.4
Uncertain minimi	39	
Other types	4	
Unclassifiable	<u>11</u>	8.7
GRAND TOTAL	126	
Total minimi	53	42.1

Fig.6:13 Summary of types from Mildenhall

They exhibit angular obverse portraits and can be considered to be derivatives of Mattingly's Invictus/implements group. The characteristic angular portraiture is seen on many other examples from Mildenhall. Five of these are illustrated in Plate 6:5, 8-12. All are badly worn and lack good detail.

The portraiture shown on numbers 3 and 4 is very similar. They both appear to copy Tetricus II's face, but they carry more mature-looking features and straight nose. Two other copies of Tetricus II are similar in style, but with a very different style to that seen in numbers 3 and 4. Numbers 5 and 6 have a more rounded face, on a square-ish flan, with no legend and a pronounced border. These examples may, too, be derived from Mattingly's Invictus/ewer group. The example shown as number 7 is not dissimilar in appearance. Two other copies of similar size are shown in Plate 6:5, 17 and 18. Both are of 13 mm diameter, with no legend and a heavy border. Both employ a simple engraving style. Their reverse figures are simple, with thin limbs. These two coins are considered stylistically similar.

Some other unusual types are present. Numbers 14 and 15 both have reverses showing a figure with a vertical staff and shield. They seem to be male figures but lack similarity to the Virtus or Mars categories. This type has not been seen elsewhere. Number 16 shows a reverse engraving with one central figure and possibly two smaller subsidiary figures. Barbarous radiates with two or three figure reverses are rare but have been identified in hoards, based upon originals of Aurelian.

Sizes and weights

A spread of diameters between 20 mm and 8 mm has been recorded

in this collection (figure 6:14). There is a peak at 15 mm and a secondary, smaller, peak at 11 mm. The weights of most of these coins have also been recorded in the catalogue. The diameters have again been plotted against weights for the Tetrican imitations, in figure 6:15. Although the range of variation against each diameter is less than was recorded at Bath, it is still high. No clustering of weights is visible and there is no possibility of a strict weight standard having been associated with these coins.

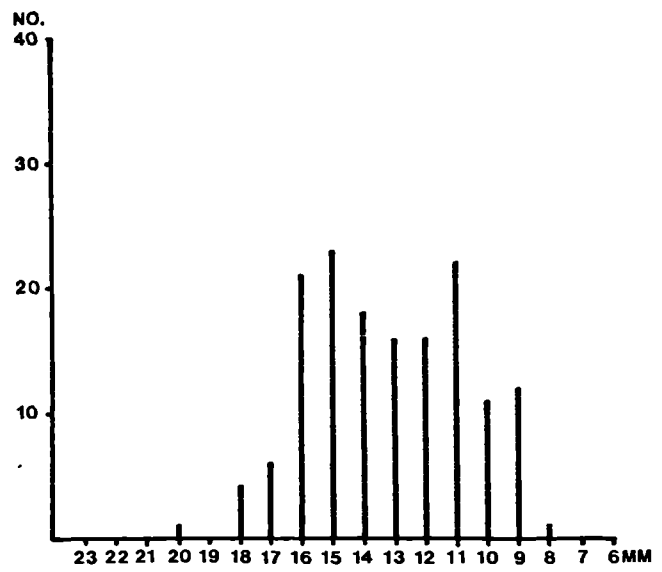
Die-axes

The die-axes for groups of Mildenhall copies are summarised in figure 6:16 and plotted graphically in 6:17. No clear peaks are seen which would indicate regular alignment, although the categories of Divo Claudio and minims do perhaps show a clustering around the value of 6.

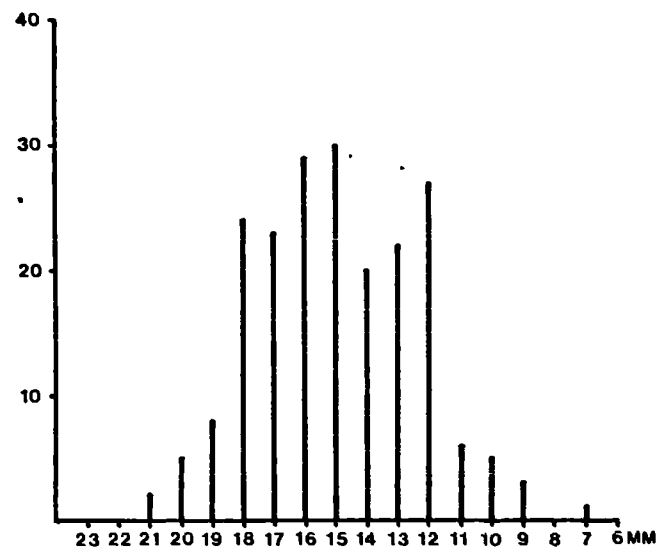
Conclusions

The assemblage from Mildenhall contains barbarous radiates of all sizes and types. A comparison of the group with previously studied site groups would indicate that this is a near-complete site collection, although the better and larger copies may be slightly under-represented. The coins of more impressive appearance may have been dispersed when the collection was originally split up.

Several examples of stylistic similarity have been postulated. The question of just when such similarities represent the products of common mints inevitably has to be confronted in a study of this kind. Sceptics will reply that the overall degree of variation within this coinage must allow



Cunetio



Wanborough

Fig.6:14 Coin diameters: Mildenhall and Wanborough

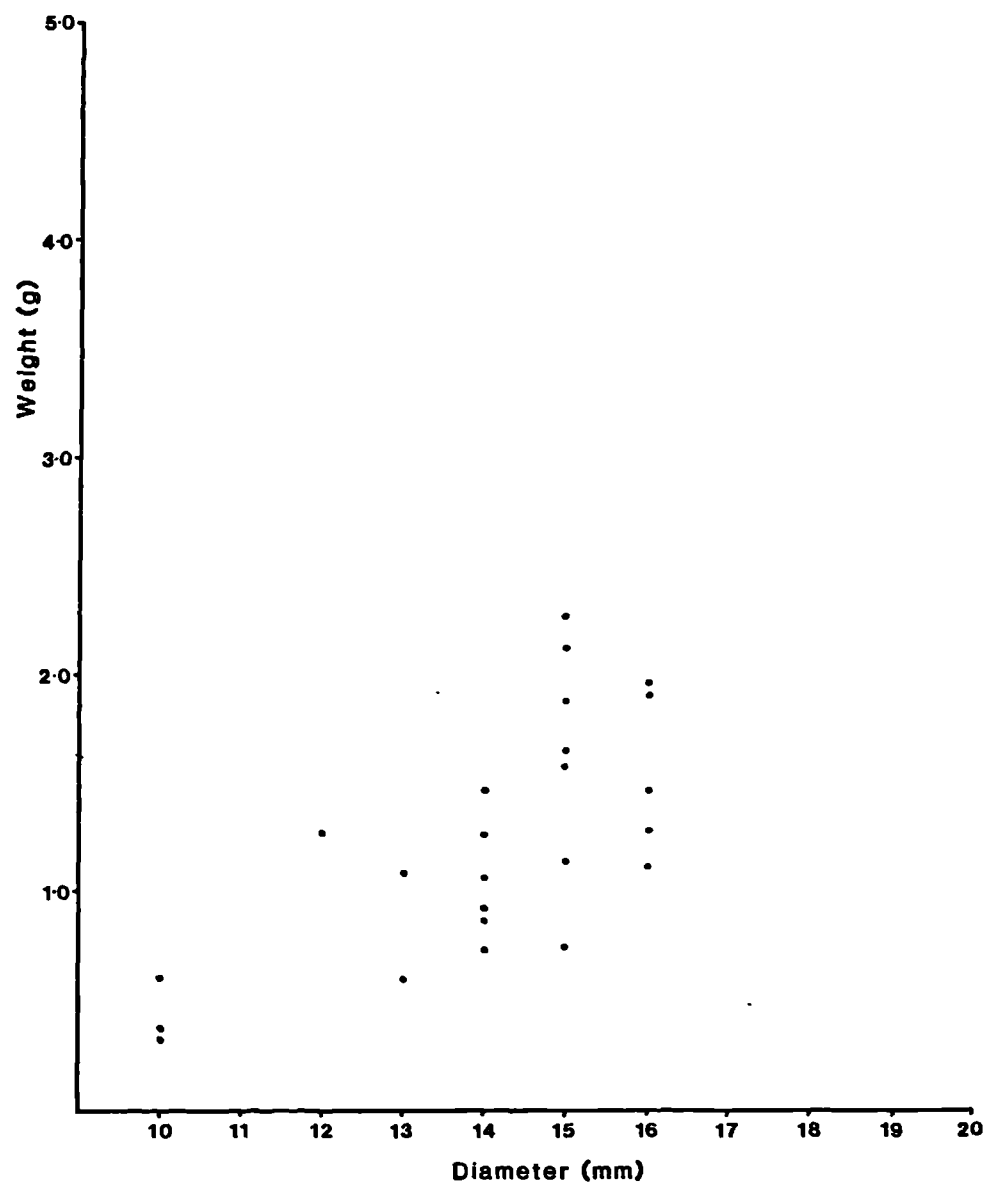
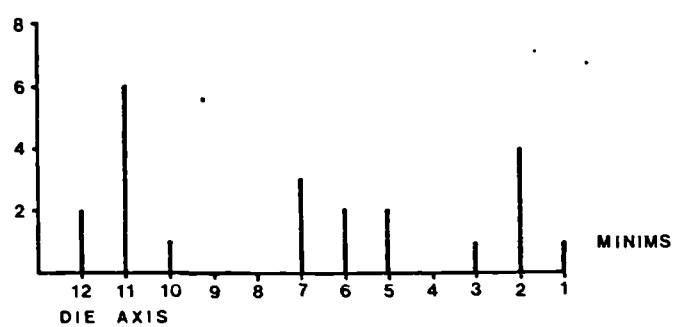
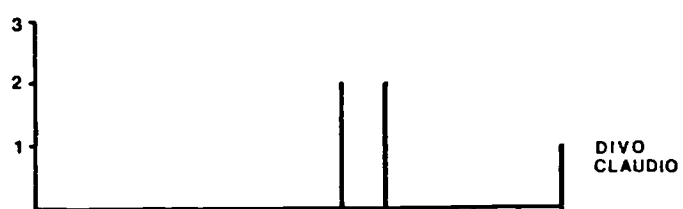
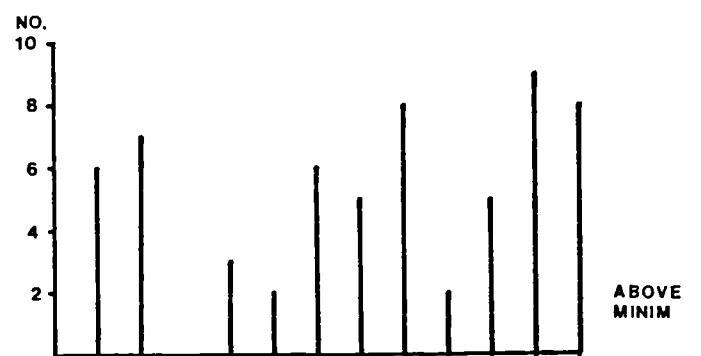


Fig.6:15 Weights of Tetrican copies from Mildenhall

<u>MILDENHALL</u>			
<u>O'CLOCK</u>	ABOVE MINIM SIZE	DIVO CLAUDIO ABOVE MINIM	MINIMS
12	6		2
11	7		6
10			1
9	3		
8	2		
7	6		3
6	5	2	2
5	8	2	2
4	2		
3	5		1
2	9		4
1	8	1	1
COIN TOTAL	<u>61</u>	<u>5</u>	<u>22</u>

<u>WANBOROUGH</u>					
<u>O'CLOCK</u>	ABOVE MINIM SIZE	CENT. EMP. ABOVE MINIM	DIVO CLAUDIO ABOVE MINIM	POSTUMUS AND VICTORINUS ABOVE MINIM	MINIMS
12	11	1	1		7
11	14	3	2	2	1
10	3				2
9	3				1
8	5				4
7	7	2	2		3
6	19	1		2	5
5	12	2	2	1	
4	6			2	4
3	5				1
2	8				5
1	8				4
COIN TOTAL	<u>101</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>37</u>

Fig.6:16 Tables of die axes: Mildenhall and Wanborough



Cunetio

Fig.6:17 Die-axes: Mildenhall

many barbarous radiates to look vaguely similar by coincidence. The examples from Mildenhall go some way towards answering this. A number of coins presented display similar characteristics of small size and angular engravings (such as those shown in Plate 6:5, 8-12). Although these are not all suggested to be products of one hand, a unity of influence is seen here, which is unique to this site and not found elsewhere. Other examples cited, such as Plate 6:5, 1 and 2; 6:5, 5 and 6, 6:5, 17 and 18 are all considered to represent cases of close stylistic similarity, representing a common origin in each case. The first and third of these were possibly derived from the widespread barbarous radiate group identified by H.B. Mattingly and described in chapter 4 as group B, by the process of successive copying of copies.

The assemblage from Mildenhall is a collection of very mixed appearance. The coins all exhibit the wear of continued circulatory use. Within the diverse collection some evidence for common mintage is present in a few instances. However, the overall conclusion must again be that there was no single mint supplying the needs of this site alone. The emphasis of the collection is one of diversity and not of unity.

Wanborough (SU 2082)

A total of 206 barbarous radiates have been studied from Wanborough, the Roman town of Durocornovium. This site was situated to the north of the Marlborough Downs, on the road between Cirencester and Silchester. The coins have been recorded from three separate collections. The largest single group comes from Swindon Museum (195 coins). Others come from Devizes Museum (ten coins) and a single specimen was found in

the trays of the Heberden Coin Room, Oxford.

The types present

The types present have been summarised in figure 6:18, both within their separate collections and combined. The excessive wear and corrosion on the Wanborough coins has created serious problems, rendering the process of identification very difficult. A total of thirty-five coins (17%) are unclassifiable. The percentages of types will not be laboriously compared with previous sites in each case. Figures are readily comparable in both the catalogue and in summary form. Only the main trends will be highlighted. The main breakdown is similar to other sites, with just under 10% Central Empire, just over 70% Gallic Empire and with Pax Aug of Tetricus I being the largest category, with 8.7%. The percentage of minimi is high, at 36.6%.

The most interesting examples present are illustrated on Plate 6:6. Numbers 1 and 2 exhibit the animal reverse types used by Gallienus (as in his legionary series, the Dianae Cons Aug series and Iovi Cons Aug issues). Both of the coins are unusual variations. The former shows an unrecognisable animal, left, with long thin legs. The latter has a horse-shaped creature, exhibiting stripes, which accordingly resembles a zebra. This coin was recorded by C.H.V.Sutherland in a Numismatic Chronicle note (Sutherland 1939).

Plate 6:6, 3 and 8 are distinctive minimi; both well-engraved and lacking legends. The obverse of number 3 is an excellent depiction of Claudius II. The reverses of both are very simple and the latter has a dotted border. A number of well-preserved Divo Claudio copies, of reduced module, are

	<u>OXFORD</u>	<u>DEVIZES</u>	<u>SWINDON</u>	<u>TOTAL</u>	
CENTRAL EMPIRE	NO.	NO.	NO.	NO.	%
Gallienus	1	1	2	4	
Claudius II					
Divo Claudio - altar			10	10	4.8
- eagle			4	4	
Aurelian/Probus		1		1	
Probus	—	—	<u>1</u>	<u>1</u>	
TOTAL CENT. EMP.	1	2	17	20	9.7
GALLIC EMPIRE					
Postumus			2	2	1.0
Victorinus					
- Invictus			6	6	2.9
- Pax Aug					
- Other			<u>5</u>	<u>5</u>	
Total Victorinus			11	11	5.3
Tetricus I and II					
- Fides Militum		2	2	4	
- Hilaritas Augg		1	7	8	3.9
- Laetitia		1	1	2	
- Mars Victor					
- Pax Aug		1	17	18	8.7
- Pietas			8	8	3.9
- Salus Augg			10	10	4.8
- Spes		2	12	14	6.8
- Victoria/Comes Aug			2	2	
- Virtus Augg			6	6	
Tet. I, uncertain rev.		1	7	8	
Tet. II, uncertain rev.		—	<u>4</u>	<u>4</u>	
Total Tetrici		8	76	84	40.8
Other types		—	<u>15</u>	<u>15</u>	
TOTAL GALLIC EMP.		8	104	112	54.4
Uncertain minimi			38	38	
Blank flan			1	1	
Unclassifiable			<u>35</u>	<u>35</u>	
GRAND TOTAL	1	10	195	206	
Total minimi		1	62	63	36.6

Fig.6:18 Summary of types from Wanborough

present. Five are illustrated (Plate 6:6, 27-31). Plate 6:6, 4 is a Postumus copy, depicting the figure of Hercules on the reverse. Another unusual Central Empire type is present, shown in Plate 6:6, 5. The reverse shows two male figures of equal size. Both faces lack legends. This coin could be based on an original of either Aurelian or of Probus, both of whom employed two-figure reverse types.

Plate 6:6, 9 is a Virtus derivative, from a Victorinus original. The legend is prominent but incorrect. Number 10 is a Tetricus II copy, with the sacrificial implements reverse. The subsidiary implements have been simplified to form an elaborate base. Number 14 is a copy of Victoria/Comes Aug. It is a good copy but strangely lacks any legend. Number 15 is a copy of Tetricus I, as shown by the obverse legend, but the portrait is a clear representation of Marius.

Some other examples are notable for their portraiture. Numbers 16 and 17 are copies of Tetricus II, with a pronounced forehead. Number 26 and number 18 are distinctive copies of Tetricus II and Tetricus I, respectively, the latter having a very clear engraving for such a small coin. Number 24 has a cartoon-like face, with no legend. Numbers 20 and 21 are minims with similar portraits of Tetricus I. Number 19 carries a design on the reverse, possibly derived from the Consecratio, altar, type. A single unstruck minim blank is present. This may suggest that production of minimi took place at Wanborough.

Die- and style-linking

The degree of surface wear exhibited by these coins has made the search for die- and style-links very hard indeed. The first coin to be discussed is that illustrated in Plate 6:6, 6. The reverse depicts a temple and has the letters S C centrally

placed. There is no legend on either face. The temple was used on the coinage of both Probus and Postumus. Few minims, such as the coin in question, can be associated with the coinage of Postumus. Conversely, copies of Probus are invariably of such a size. Additionally, this example more closely resembles the reverse variety used by Probus and it has been ascribed to him. This coin is of particular interest because it bears very close stylistic similarity to a coin from France. The coin shown in Plate 6:6, 7 is a cast taken from a coin seen in the Bibliotheque Nationale in Paris. It is unprovenanced but does originate from Gaul. Both the obverse and reverse of the French coin are slightly wider coins. The obverses have the same shape of head and treatment of the hair, while the reverse also carries the letters S C. Although these coins do not die-link they are very similar and betray a common origin. No other copies even remotely similar to these have been encountered elsewhere. The significance of continental die- and style-linking will be considered in its own right in chapter 11.

The coin shown in Plate 6:6, 25 is an example of the Invictus/ewer group. The obverse has the usual V-shaped neck and the reverse is the Invictus variant. This example does not die-link to any known members of the group but is a clear example. A single example of Mattingly's Pax Aug group is also present (chapter 4, group A). It is illustrated on Plate 6:6, 11.

Coin sizes

The diameters of the Wanborough barbarous radiates are shown in figure 6:14. They range from 21 mm to 7 mm, with most falling

between 18 mm and 12 mm, inclusive. There is a peak at 15 mm, with a lesser peak at 12 mm. In the cases of the excavated site assemblages studied in this chapter, from Cirencester, Mildenhall and Wanborough, the graphs of the coin diameters show a distinctive shape. The general bell-shape has a small trough in the centre. There are two peaks; one major peak at 15/16 mm and a subsidiary peak at 11/12 mm. Just what this interesting pattern means requires further consideration in subsequent chapters. An initial interpretation may suggest that two distinct traditions of coinage are in question - the larger copies and the minims. Before this can be explained with conviction, the results from other sites, both from the west of England and from other parts of the study area, must be compared.

Coin weights

No evidence for a weight standard could be found within the irregular coinage studied from the sites of Bath and Mildenhall. Three separate groups of coins from Wanborough have been studied; the Divo Claudio copies, the Postumus and Victorinus copies and the minims. The results are shown in figure 6:19. Once again, no evidence of clustering can be seen among the values plotted in the three graphs.

Die-axes

The die-axes for five groups of imitations from Wanborough have been recorded in figure 6:16 and shown in 6:20. The categories used are those employed for previous sites. In all the categories, except for minims, it is possible to detect an attempt at die-axis alignment.

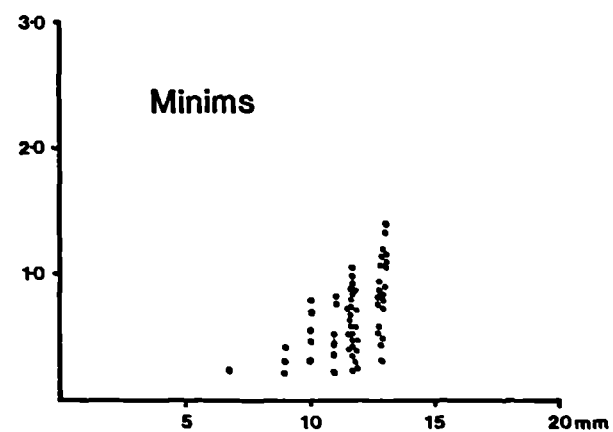
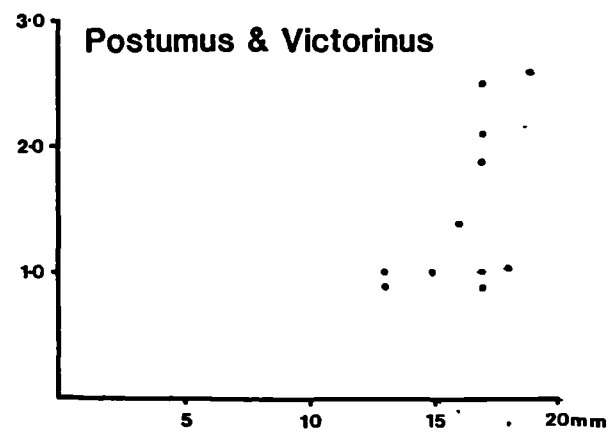
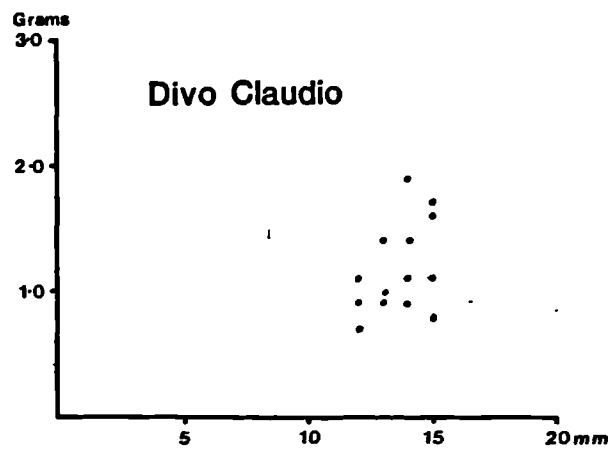
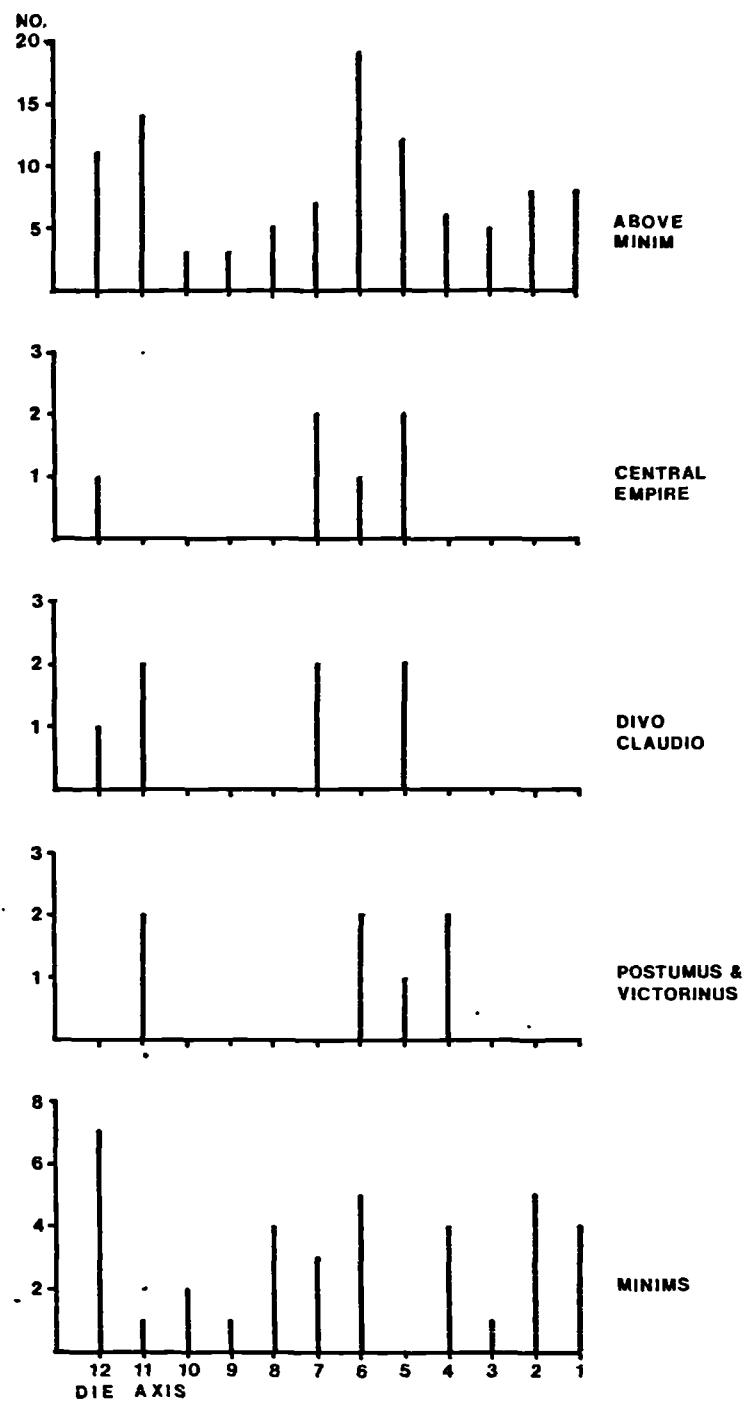


Fig.6:19 Weights of barbarous radiates from Wanborough



Wanborough

Fig.6:20 Die-axes: Wanborough

Conclusions

Once again, there are no die-links present within this combined site collection. For the size of site, there is also very little style-linking recognisable. This is partly because the author is erring on the side of caution in his presentation of the material at this stage. If attempts to suggest many such links were put forward in this work, critics would all too easily seize on that aspect for criticism. However, the presence of examples of the Invictus/ewer group, the Pax Aug group and the Gallic link all serve to support the findings of H.B. Mattingly, which concluded a wide circulation of these coins. The presence of a blank minim flan may result from some coin production at the site.

Wanborough Plain

A single barbarous radiate from Wanborough Plain was recorded at Newbury Museum. The coin combines an obverse of Tetricus I with a reverse of Aequitas Aug, as shown in Plate 6:6, 32.

Cold Kitchen Hill (ST 8338)

A small total of eighteen barbarous radiates was sorted from an assemblage of approximately 200 Roman coins in Devizes Museum, from the Roman temple at Cold Kitchen Hill. The distribution of types is recorded in figure 6:21.

The range of types is spread among the same categories as on the larger sites. The percentage of Central Empire copies is high, but this may result from the small number of coins in question. The size range is spread between 21 mm and 13 mm, with most between 18 mm and 15 mm. Minims appear to be under-

CENTRAL EMPIRE	NO.	%
Gallienus	2	
Claudius II		
Divo Claudio - altar		
- eagle	2	11.1
	—	
TOTAL CENT. EMP.	4	22.2
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus		
- Pax Aug		
- Other		
Total Victorinus		
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg	3	16.7
- Laetitia	2	11.1
- Mars Victor		
- Pax Aug	1	5.6
- Pietas		
- Salus Augg	1	5.6
- Spes	1	5.6
- Victoria/Comes Aug	1	5.6
- Virtus Augg	2	11.1
Tet. I, uncertain rev.	1	
Tet. II, uncertain rev.	—	
Total Tetrici	12	66.7
Other types	1	
TOTAL GALLIC EMP.	13	72.2
Uncertain minimi	1	
Unclassifiable	—	
GRAND TOTAL	18	
Total minimi	2	11.1

Fig.6:21 Summary of types from Cold Kitchen Hill

represented in the collection.

Two distinctive Divo Claudio, Consecratio, copies are present, as shown in Plate 6:7, 1 and 2. Both carry the eagle reverse and are stylistically similar. The obverse in each case carries a square-shaped portrait and thick neck. The reverses show a very large, stiff, eagle, with prominent talons. Number 2 has wide wings, inset with dashed feathering.

The coins shown in Plate 6:7, 4-6 are stylistically similar. All have similar obverses, which show a portrait of Tetricus I, with simplified nose and dotted eye. Large lettering and a border are common to 5 and 6. Numbers 5 and 6 also carry the reverse figure of Virtus, with elongated arms. Another illustrated example is number 9, which may depict the figure of Mars Victor on the reverse.

Although this assemblage comes from a temple site, the barbarous radiates collectively resemble the site collections recorded above, rather than the 'votive' assemblage from the previous temple site, at Bath. They are not thought to be a votive group.

Westbury Ironworks (ST 8751)

Twenty-five barbarous radiates from the site of Westbury Ironworks were recorded at Devizes Museum. They come from excavations at the site in 1879-80. The types are shown in figure 6:22.

This small assemblage again contains some very interesting examples. Plate 6:7, 10 is a large copy of Postumus, which is a good imitation but has been let down by the obverse portraiture. The reverse type is Oriens. Plate 6:7, 11 shows a Victorinus copy. The reverse Salus Aug is well-engraved but

CENTRAL EMPIRE	NO.	%
Gallienus	1	
Claudius II	3	
Divo Claudio - altar		
- eagle		
TOTAL CENT. EMP.	4	16.0
GALLIC EMPIRE		
Postumus	1	
Victorinus		
- Invictus	2	8.0
- Pax Aug		
- Other	<u>1</u>	
Total Victorinus	3	12.0
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg		
- Laetitia		
- Mars Victor		
- Pax Aug	2	8.0
- Pietas		
- Salus Augg	1	
- Spes	2	
- Victoria/Comes Aug	1	
- Virtus Augg	4	16.0
Tet. I, uncertain rev.		
Tet. II, uncertain rev.	—	
Total Tetrici	11	44.0
Other types	<u>1</u>	
TOTAL GALLIC EMP.	16	64.0
Uncertain minimi	5	
Unclassifiable	—	
GRAND TOTAL	25	
Total minimi	5	20.0

Fig.6:22 Summary of types from Westbury Ironworks

the portrait is unrecognisable. Number 12 contains a weak engraving of Invictus, again coupled with a very poor obverse likeness.

A copy of Tetricus II is shown which has an enlarged jaw line (Plate 6:7, 13). Numbers 14 and 15 are very basic engravings with male figures depicted on the reverses. Number 14 is Virtus Aug but 15 is obscure. The obverses are thinly engraved, with little traces of legends.

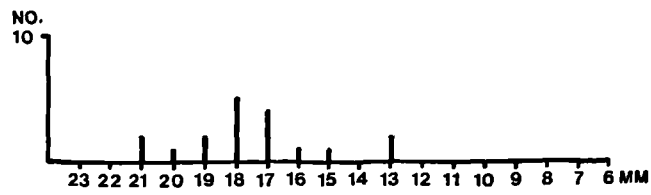
The diameters of these coins are shown in figure 6:23. They range from 23 mm to 9 mm and peak at 17 mm and 15 mm. Both Cold Kitchen Hill and Westbury have a similarity of coin types and sizes to that seen for the larger sites in the area, despite the very small coin numbers in question.

Other Wiltshire sites

Ten smaller Wiltshire sites account for a further thirty-nine barbarous radiates. All of these coins have been fully catalogued in the appendix. Seven of these are illustrated in Plate 6:7.

Five of the coins illustrated come from Atworth. Number 16 shows a very free engraving of Tetricus I. Number 18, also of Tetricus I, is an unusual copy of Pax Aug. Number 20 is a reverse type described as a 'pin-figure', and which has no obvious prototype. Number 17 is a Divo Claudio copy, similar in style to the group isolated at Cold Kitchen Hill (Plate 6:7, 1-2), although this example has an altar reverse. Number 19 is a copy of Tetricus I and is stylistically similar to the group from Cold Kitchen Hill, illustrated in Plate 6:7, 4-6.

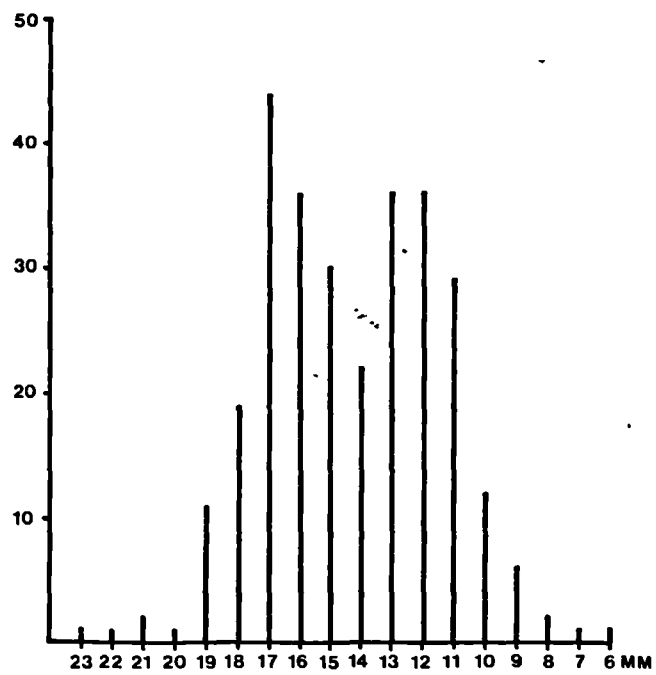
Two copies from Easton Grey show similarity to other coins. Number 21 is a copy of Tetricus II. It has the same facial



Cold Kitchen Hill



Westbury Ironworks



Colliton Park

Fig.6:23 Coin diameters: Cold Kitchen Hill, Westbury Ironworks and Colliton Park

engraving style as others from Sea Mills (Plate 6:4, 1-4).

Plate 6:7, 22 is very similar to the group of Victorinus copies identified at Cirencester, and shown in Plate 6:1, 10-21.

Hoard from Wiltshire

Four hoards which contain barbarous radiates have been recorded from Wiltshire. They come from Bowood House, Mere, Mildenhall (Cunetio) and Nettleton. These will be considered, alongside hoards from other counties, in chapter 13. Two of these have been personally inspected for the purposes of the current study and will be considered briefly here.

The Mere hoard has been studied and published (Mattingly 1934). However, the opportunity was taken to inspect, weigh and measure these coins at first hand, on a visit to Salisbury Museum. Mattingly listed the contents to be 100 barbarous radiates. One-hundred-and-one are now allocated to the hoard, at the Museum, and it has been impossible to discover whether the extra coin belongs with the hoard or not. The coins are in good, unworn, condition. There is no die-linking between them and they exhibit different styles.

The overwhelming proportion of examples have small flans and tiny die-engravings. This deposit can thus be termed a 'minim hoard'. Although nineteen coins do have diameters which exceed 13 mm, they carry small engravings, in common with the minims.

The diameters and weights of the coins have been plotted in figure 6:24. It is clear from this graph that no weight standard was in use. For example, coins with a diameter of 12 mm vary in weight between 0.27 g and 1.35 g. The die-axes have been recorded in figure 6:25, but the results are somewhat ambiguous. Die-axes range across all angles of the clock face

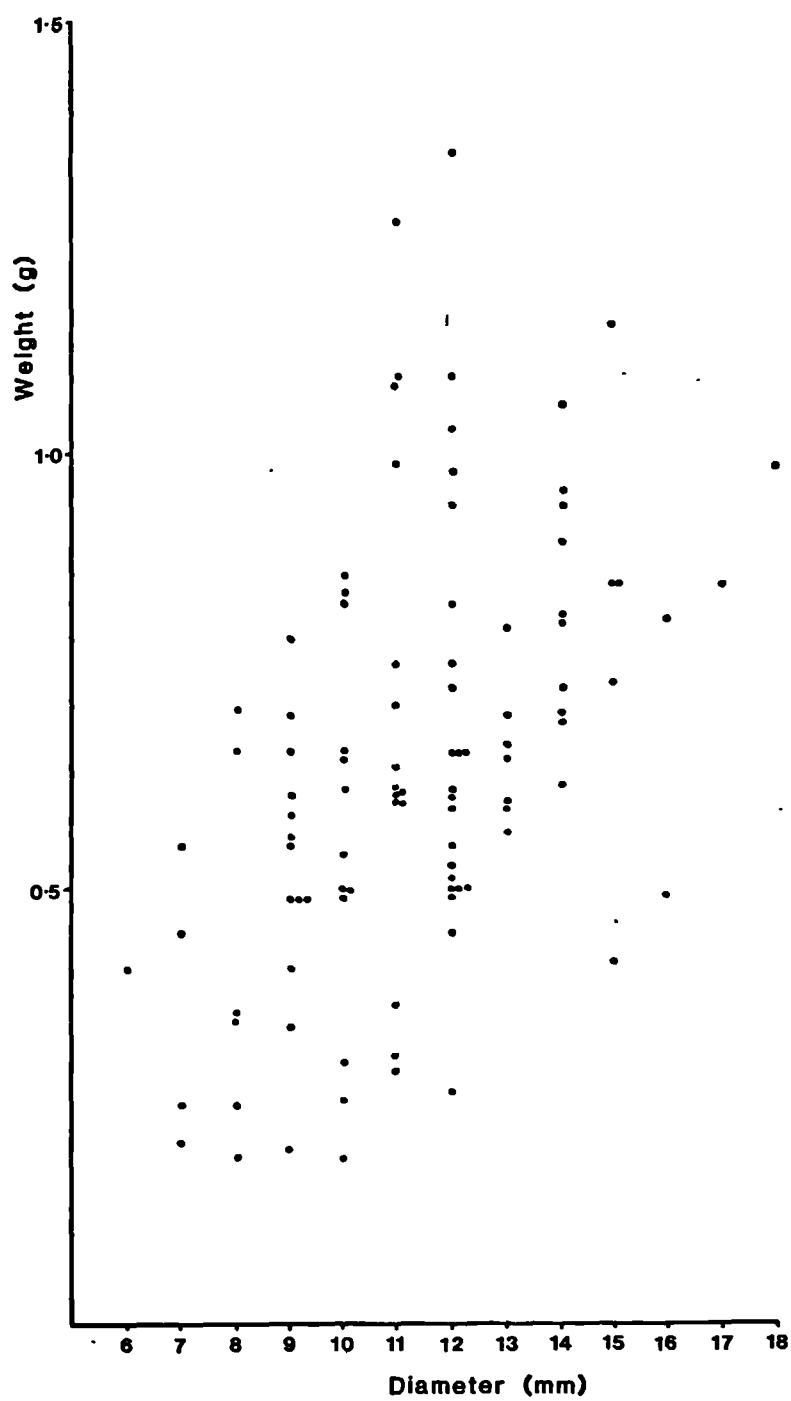


Fig.6:24 Mere hoard: diameters and weights

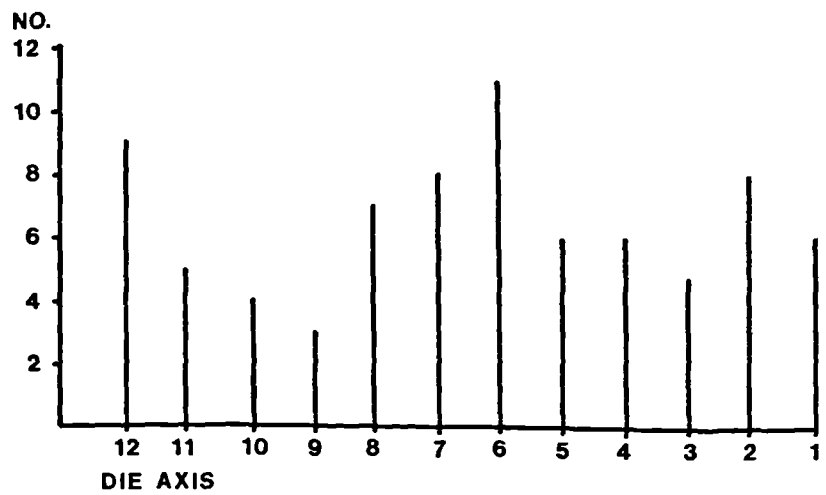


Fig.6:25 Die-axes: Mere hoard

but there is a preference for the values of 6 and 12. Once again, it is concluded that there was some limited attempt to align obverse and reverse dies within this irregular coinage, in accordance with regular issues.

The entire Mere hoard was illustrated by Mattingly, but three coins of relevance to the current study are reproduced in Plate 6:7. Number 23 is a member of the Invictus/ewer group and number 24 may be a derivative of the same group. Number 25 closely resembles the Claudius II copies identified at Cirencester, which are illustrated in Plate 6:2, 1-2.

The Cunetio hoard has also been published (Besly and Bland 1983). The authors discussed and illustrated the irregular component in detail and further description is not required here. Besly and Bland considered a group of thirty barbarous radiates present, which were all struck from two obverse dies, to have been locally minted. No examples from the same dies were found among the Mildenhall collection studied above. Nor have any west country site finds been found to link with any of the hoard coins. This may suggest that the Cunetio die-group was imported to Britain alongside the other irregular and the regular coins from the hoard, and does not represent British production.

Dorset

The coins examined from the county of Dorset all come from within Dorchester. They represent just two sites. The first is an isolated find, from the Dorset County Hospital, and has been described in the catalogue. The others all come from Colliton Park.

Colliton Park (SY 6990)

A total of 290 barbarous radiates have been recorded from excavations on the site of the County Library in Dorchester (Durrovaria), at Colliton Park (Drew and Collingwood Selby 1937 and 1938). Dorchester is the most south-westerly town to be included in the current study. No immediately adjacent sites of any size have been available for comparative study.

The types present

The distribution of types, as shown in figure 6:26, is similar to that recorded for other western sites. The Central Empire accounts for 10.7% of the assemblage, the Gallic Empire 82.8% and the Tetrici 40.7%. The predominant types represented for the Central Empire are the Divo Claudio category and for the Gallic Empire they are Pax Aug, Salus, Spes and Invictus. The percentage of minimi is very high, with 44.8%, which is greater than the corresponding percentages for Cirencester Excavations (44.2%) and Mildenhall (42.1%).

The state of preservation among the coins is very good, with just nineteen remaining unclassifiable. Twenty-five are illustrated in Plate 6:8. Central Empire examples include a copy of Claudius II, which has been combined with the Tetrican reverse Pietas Augg (Plate 6:8, 2). Three copies of Aurelian's coinage are present. One is illustrated, in Plate 6:8, 4, with

CENTRAL EMPIRE

Gallienus	2	
Claudius II	3	
Divo Claudio - altar	17	5.9
- eagle	5	
Quintillus	1	
Aurelian	<u>3</u>	
TOTAL CENT. EMP.	31	10.7

GALLIC EMPIRE

Postumus	3	1.0
Victorinus		
- Invictus	15	5.2
- Pax Aug		
- Other	<u>10</u>	
Total Victorinus	25	8.6
Tetricus I and II		
- Fides Militum	3	
- Hilaritas Augg	3	
- Laetitia	4	
- Mars Victor		
- Pax Aug	38	13.1
- Pietas	7	
- Salus Augg	19	6.6
- Spes	17	5.9
- Victoria/Comes Aug	2	
- Virtus Augg	5	
Tet. I, uncertain rev.	13	
Tet. II, uncertain rev.	5	
Unusual types	<u>2</u>	
Total Tetrici	118	40.7
Other types	<u>8</u>	
TOTAL GALLIC EMP.	154	
Uncertain minimi	86	
Unclassifiable	<u>19</u>	6.6
GRAND TOTAL	290	
Total minimi	130	44.8

Fig.6:26 Summary of types from Colliton Park

his Oriens Aug reverse. Catalogue number 30 is based on his Oriens reverse, although the engraving is less clear.

Catalogue number 31 is also a copy of Aurelian and carries a mint mark in the exergue. Some of the numerous minims at the site have been illustrated. They include a Divo Claudio eagle (Plate 6:8, 3), a near-charicature of Postumus (number 5) and two uncertain 'pin figure' types of very poor style (numbers 24 5).

Distinctive portraiture characterises two imitations. Plate 6: 8, 13 is a Pax Aug copy which has a long, triangular obverse portrait of Tetricus I. Number 14, in contrast, has a very rounded Tetrican portrait, with correct legend. Two Tetrican Spes copies are illustrated (numbers 22-3). One is a very accurate copy of Spes Publica, of the Cologne mint (number 22). The other is much cruder, although of similar size, and lacks any legend.

Coin sizes

The diameters of the coins are summarised in figure 6:23. The graph again shows a double peak; with the major peak at 17 mm and the minor one at 13-12 mm. The sizes range between 23 mm and 6 mm, with the bulk of the collection falling between 19 mm and 10 mm.

Die and style-linking

One of the Colliton Park imitations links with a coin from Gaul. This is shown on Plate 6:8, 1. It is a Gallienus copy, with a doe or stag, walking right, depicted on the reverse. This coin die-links on both faces with another from the Bibliotheque Nationale collection in Paris. A cast of the French example was obtained and this is shown in Plate 6:8, 26.

Unfortunately, that example lacks an exact provenance within Gaul.

Two Colliton Park coins are members of Mattingly's Invictus/ewer group. Plate 6:8, 7 is the Invictus variety, with no legend, and number 8 is the ewer type. Four other Invictus copies are shown (numbers 9-12). They exhibit a different style but may represent derivative forms of the Invictus/ewer group. They are of similar size, of 15-16 mm, with simple obverse portrait and heavy reverse border around the figure of Invictus. There is one other possible style-link present. The coin shown in Plate 6:8, 6 has a reverse of a spidery figure, holding a staff, left. A similar reverse has been recorded at the Hampshire site of Bitterne (Plate 7:2, 5), although the obverse is very different.

Five minims are illustrated in Plate 6:8, 15-19. They are all obverse and reverse die-links. The obverse type is Tetricus II, coupled with the Salus Augg reverse of Tetricus I. They measure 11-12 mm in diameter. It is possible that these coins represent the output of a mint which produced minimi, in the Dorchester area. Other minims present also carry the reverse type Salus (numbers 20-1). These may form part of the output of the same irregular mint.

Conclusions

One of the features of the assemblage from Colliton Park is the high percentage of minims present. The figure of almost 45% is remarkable for an excavated collection. The problems of recovering these tiny coins during excavation would be expected to bias any such assemblage towards the larger coins. It is deduced that minims originally circulated in very high numbers

in this area, during the 270's and 280's AD.

The six die-links present do not comprise a high proportion of the overall assemblage but they are a very useful addition to our knowledge of barbarous radiates. The die-link with Gaul is especially interesting and such continental links will be examined in chapter 11, together. Examples of the Invictus/ewer group can be seen to be present within all large site collections. When they are all closely compared, some differences do emerge and the distribution of derivative styles, within the overall group, must be considered at a later stage of this thesis.

Hcards from Dorset

Only one hoard containing barbarous radiates has been recorded from Dorset. This was found at Poole and was published by Harold Mattingly (Mattingly 1933). It contained almost 1,000 coins, spanning the entire third century, to the Tetrici. Just si barbarous radiates were present. This hoard will be studied alongside all others in chapter 13.

Scmerset

It was not intended to include the county of Somerset in the current study at the outset but the opportunity has been taken to investigate the important late-third century hoard from Meare Heath. This hoard was considered to be of great importance to our knowledge of barbarous radiates in the west of England. Just one site find has been recorded from this county, from Charlton, and this is listed in the catalogue.

The Meare Heath hoard

In 1972 a late-third century hoard, containing 1,404 pieces, was discovered on ground owned by Fisons Agrochemical Division, at Meare Heath in Somerset. The hoard was presented to Taunton Museum, after receiving initial identification at the British Museum. A quantitative summary of the hoard was subsequently published (Carson and Bland 1976). The composition was shown to comprise 385 regular antoniniani of the years approximately between AD 260 and 274, 869 imitations and 150 unstruck flans. The publication did not include a detailed assessment of the irregular component. The presence of unstruck flans indicated to this writer, following his research into barbarous radiates, that the deposit might include a substantial component which had come straight from a mint, and that die-links may also be present. The writer had also recognised a predominantly western distribution of barbarous radiate minim hoards within Britain (this observation will be developed in chapter 13). It was considered that this may be another such minim hoard. Although the Meare Heath hoard came from just outside the main study area for the current research programme, the county of Somerset was subsequently embraced to enable its inclusion, and preparations were made for its study, at Somerset County Museum, Taunton.

The study of the Meare Heath hoard by this writer was made with the financial assistance of the Maltwood Fund of the Royal Society of Arts and was subsequently published as a paper entitled, 'The Meare Heath, Somerset, Hoard and the Coinage of Barbarous Radiates', in the journal Numismatic Chronicle (Davies 1986). An offprint of the paper is included at the back of this thesis. The detailed analysis and results need not be repeated within the main text, here. However, the more

significant findings, of relevance to this chapter, will be summarised.

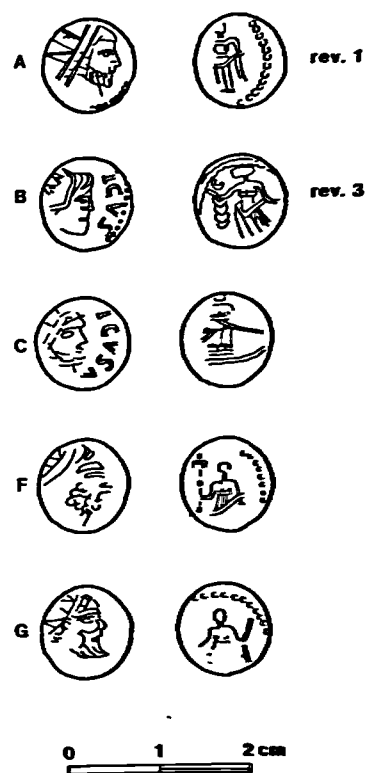
Almost half of the hoard coins are of very small module; 650 of the 869 imitations measure 13 mm or less (including all but one of the blank flans). All of the copies were produced by striking. The most important finding was that over 20% of barbarous radiates were struck from only a few dies. These 184 examples were assigned to ten groups, based on die- and style-associations (groups A-J). These groups are fully described and illustrated in the publication. The degree of die-linking between these groups, their closeness of style and the presence of so many unstruck flans suggests a common origin for this portion of the hoard. It is observed that hoards such as Meare Heath, with substantial numbers of minims present, are found predominantly in the west of Britain (as will be expanded in chapter 13). The experience of handling site collections shows that barbarous radiate die-groups rapidly become dispersed once they entered circulation and a local origin for the Meare Heath groups is favoured.

Other external style-links are present among the Meare Heath coins. These include members of Mattingly's Pax Aug and Invictus/ewer groups. Other types are related to coins from Sussex hoards. These are all described and illustrated in the paper. The second part of the paper is concerned with placing the Meare Heath hoard in its context and the discussion is of more relevance to chapters 13 and 15, below.

The Meare Heath die-groups are fully illustrated in the hoard report. However, line drawings of the more numerous groups are provided here, for ease of reference, in figure 6:27.

The Meare Heath hoard contains a large collection of apparently locally manufactured imitations, of minim size. That portion of the hoard is uncirculated. In addition, other irregular coins are present which are associated with major groups found in other parts of Britain. The 385 regular antoniniani present show that regular issues of the years 260 to 274 were still available for hoarding when the hoard was buried, sometime between AD 280 and 283/4.

Since the preparation of the Meare Heath report, two further discoveries of irregular antoniniani from the vicinity of Meare have been notified to the writer. These will again be published in Numismatic Chronicle (Davies 1987a). At the time of writing, photographs of these coins are not available for presentation here, but they will accompany the publication in question. The first group is a lot of nine barbarous radiates which was acquired by Somerset County Museum, Taunton, in 1976 (information supplied by Mr S.C.Minnitt). Enquiries showed that this small group came from a substantial hoard of 1,100 coins which had been found on a farm near Glastonbury. Three of the coins die-link to the Meare Heath die-groups A and B. Many more die-links would undoubtedly have been present among the rest of the hoard, which has since been dispersed. The second group comprises sixteen coins, including one regular issue, which were sent to the British Museum in 1984 (information supplied by Mr R.F.Bland). These coins were discovered on a market garden near Cheddar, the precise location of which is unknown. The size of the original find is uncertain but the coins are known to have been accompanied by others, including about twelve regular antoniniani, mostly of Tetricus I. Six of the irregular examples die-link to Meare Heath hoard die-group A.



g.6:27 Meare Heath hoard die-groups. Scale 1:1

The exact findspots of these two groups are unknown but they do not appear to have been part of the Meare Heath hoard. Neither do they appear to have come from the same findspot. Both groups were found within ten miles of Meare Heath and the die-links strengthen the likelihood of a substantial irregular production centre in the vicinity of Meare, during the late 270's and early 280's.

The West Country - a summary

The detailed survey of the coinage of barbarous radiates from sites in the south western counties of England has produced some consistent observations and patterns within the data. The first aspect to be confronted with each new collection has been an initial process of sorting. The main categories of imitation found within the larger collections are presented for comparison, in tabular form, in figure 6:28. It is observed that these categories maintain very consistent percentages at different sites. The differences observed in the votive deposit from Bath must result from a process of selective deposition. The percentages of minimi from the larger excavated site collections tend to be high. This presentation of data from the western assemblages collectively reflects the types of irregular coin which were in general circulation there.

The distribution of coin sizes from the site studied produces a spread of values from 23 mm to 6 mm, with peaks at 15-16 mm and 11-12 mm. Detailed study has shown that no weight standard was being used. However, analysis of die-axes suggests that there was often a conscious attempt to align dies. There can have been no practical advantage in aligning

	CIRENCESTER								
	MUSEUM	EXCAVATION	SEA MILLS	MILDENHALL	WANBOROUGH	COLD KITCHEN HILL	WESTBURY	COLLITON PARK	BATH
TOTAL CENT. EMP.	2.5	7.0	13.6	8.7	9.7	22.2	16.0	10.7	26.4
Divo Claudio	0.8	4.7	4.5	7.1	6.8	11.1	-	7.6	16.4
TOTAL GALL. EMP.	80.2	53.1	63.6	48.4	54.4	72.2	64.0	53.1	68.2
Tot. Victorinus	15.6	7.8	4.5	3.2	5.3	-	12.0	8.6	4.5
Invictus	5.9	4.7	4.5	2.4	2.9	-	8.0	5.2	2.7
Tot. Tetrici	55.3	38.0	54.5	34.9	40.8	66.7	44.0	40.7	58.1
Pax	16.9	10.9	18.2	6.3	8.7	5.6	8.0	13.1	20.0
Salus	5.9	4.7	4.5	1.6	4.8	5.6	4.0	6.6	4.5
Spes	7.6	8.5	13.6	6.3	6.8	5.6	8.0	5.9	10.0
TOTAL MINIMI	27.0	44.2	31.8	42.1	36.6	11.1	20.0	44.8	2.7
ASSEMBLAGE COIN TOTAL	<u>237</u>	<u>258</u>	<u>22</u>	<u>126</u>	<u>206</u>	<u>18</u>	<u>25</u>	<u>290</u>	<u>110</u>

Fig.6:28 Barbarous radiate types from sites in western counties

dies precisely and the reason for this practise must merely have been an attempt to emulate the official coinage.

The main objective at the outset of this study was to search for die-linking within the collections studied. Despite the thorough study and the laborious comparison of photographs of all legible barbarous radiates encountered, both with each other and with all examples in print, the number encountered is very low. The very small proportion of die- and close style-links encountered reflects a huge output from the irregular mints and indicates that each die did not produce high numbers of coins. These initial findings have meant that more emphasis needs to be placed on the technique of style-linking than had been hoped. The identification of coins bearing similar style, which may indicate a similar source, will undoubtedly always find critics. However, if employed carefully, it can be a profitable way of imposing order within the immensely diverse body of previously unmanageable data under consideration.

Some success has been achieved by the application of die- and style-linking. Links with Gaul have been identified at the sites of Wanborough and Colliton Park. Numerous examples of types associated with Mattingly's established die- and style-groups have also been noted and can be summarised here.

	Invictus/ewer group types	Invictus/ewer group derivatives	Pax Aug group
Cirencester	1	4	1
Mildenhall	2	2	-
Wanborough	1	-	1
Colliton Park	2	4	-
Mere Hoard	2	-	-
Meare Heath Hoard	9	-	7

Substantial die-linked groups have been identified at the site of Colliton Park, in the hoard from Meare Heath and from the vicinity of Meare, which are considered to represent manufacture close to these findspots. At other sites, a limited amount of stylistic similarity has been seen, which is thought to be a result of local production, although the limited scale of such linking indicates that such manufacturers were not working on a large enough scale to fulfil the coin requirements of whole sites.

Finally, this area of western England can be seen to have been one of importance with relation to radiate minimi. Minims have been shown to form a consistently substantial presence at excavated sites. The die-links at Colliton Park and at Meare Heath involve minims. Other minim hoards have been regularly found from the west of Britain, in addition to the examples studied in this chapter, and will be considered together in chapter 13. The observations from the west must now be compared closely with those from other parts of southern England before further conclusions can be drawn.



Plate 6:1 Cirencester. Scale 1:1

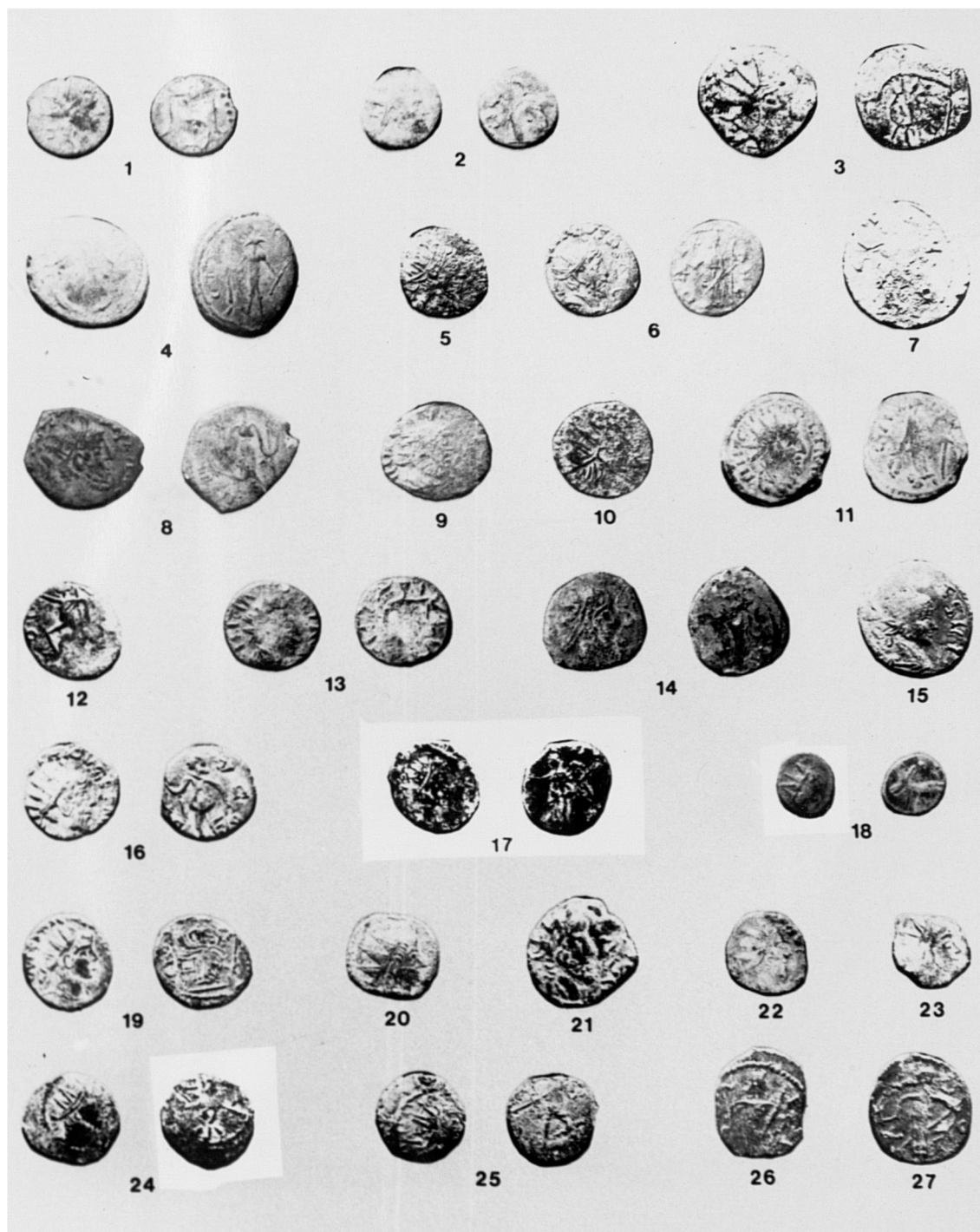


Plate 6:2 Cirencester. Scale 1:1



Plate 6:3 Bath and Coln St Aldwyn. Scale 1:1



Plate 6:4 Sea Mills, Gatcombe, unprovenanced minims and Bristol. Scale 1:1

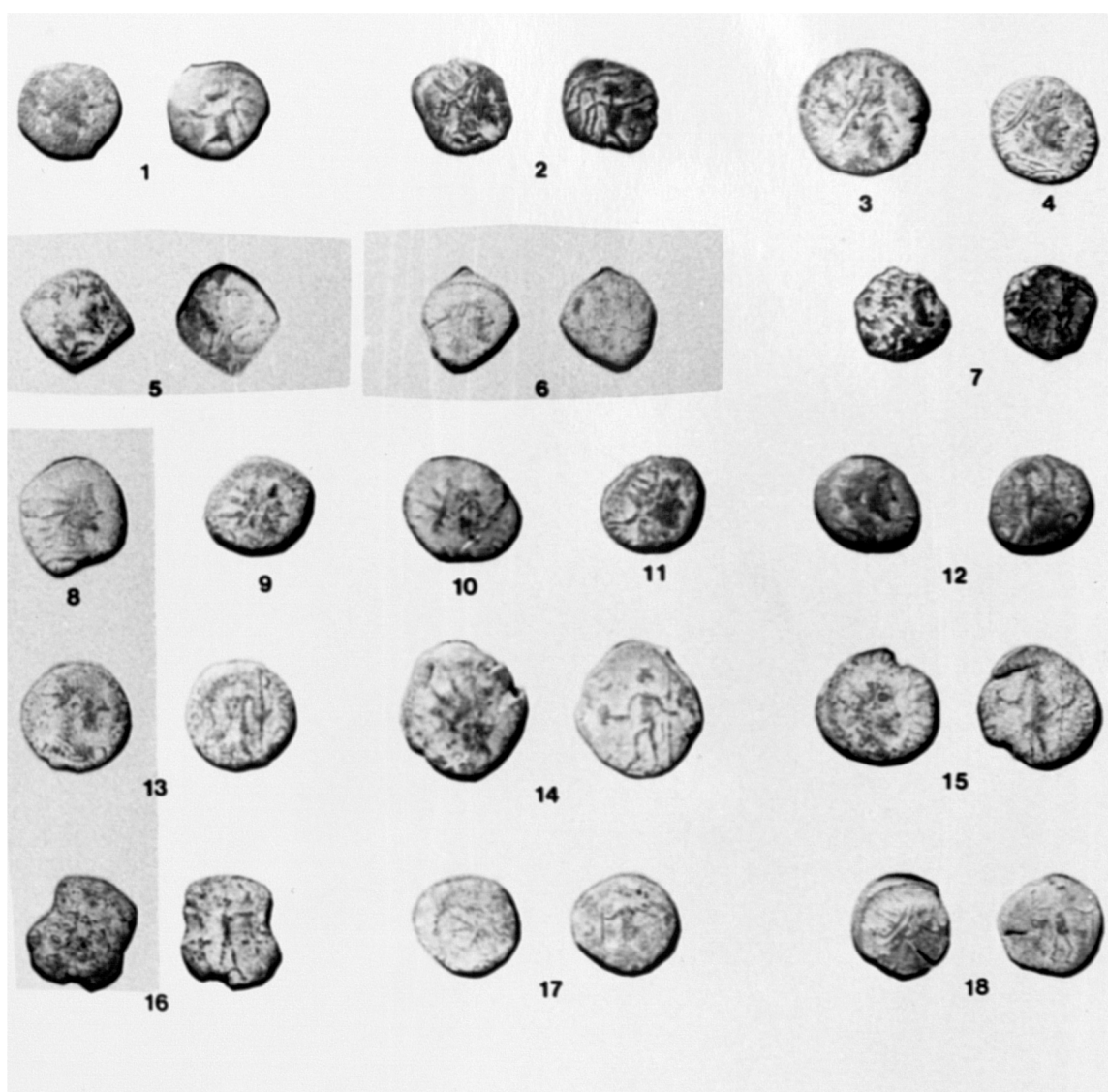


Plate 6:5 Cunetio. Scale 1:1



Plate 6:6 Wanborough. Scale 1:1



Plate 6:7 Cold Kitchen Hill, Westbury Ironworks,
miscellaneous Wiltshire finds and Mere Hoard.
Scale 1:1

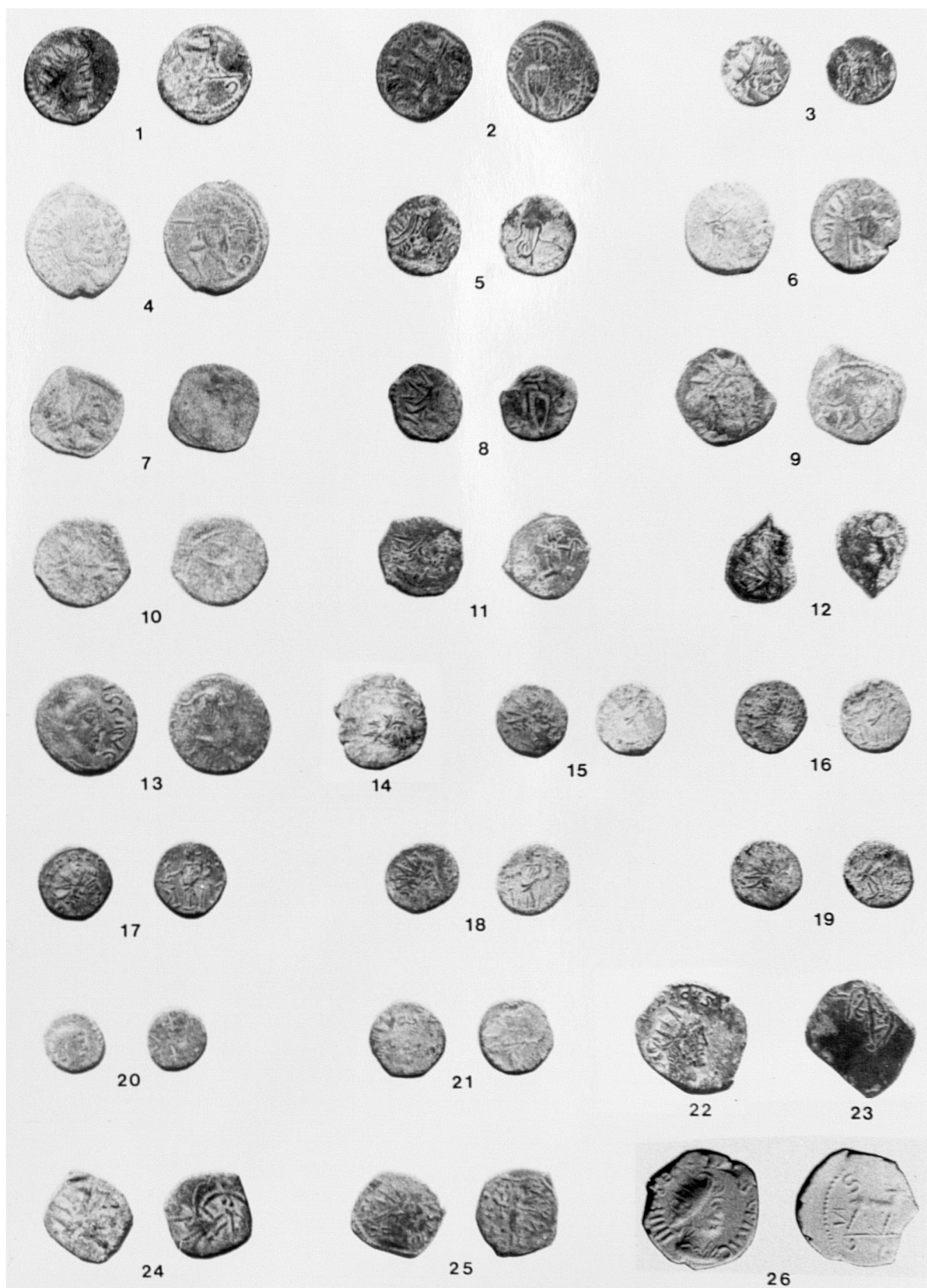


Plate 6:8 Colliton Park. Scale 1:1

Chapter 7. Berkshire and Hampshire

In this chapter, coin collections from the counties of Berkshire and Hampshire will be considered. These adjacent counties form a geographical block stretching from the Channel coast, inland for some fifty miles. A total of 1,818 site finds have been studied from twenty-two sites. Of these, only Silchester, Winchester and Neatham were of any appreciable size. Only four relevant coin hoards, which contain barbarous radiates, have been recorded from this area. These are documented in chapter 13 but are not considered separately here.

The sites considered in this chapter exhibit a very wide range in the sizes of their coin assemblages. The Silchester collection, which was mainly accumulated between the years 1890-1909, contains over a thousand barbarous radiates. In contrast, fifteen of the sites have less than ten coins. Several different site types are represented, including two civitas capitals (Silchester and Winchester), a small town (Neatham), villas and minor settlements. The feature common to many of these sites was that of their extensive communications, with all parts of southern Britain and across the Channel.

Summary of the coins recorded

Berkshire

- | | |
|-------------------------|-------------------------------|
| 1. Combe (1), | 2. Compton (1), |
| 3. Cox Green Villa (3), | 4. Maddie Farm (2), |
| 5. Newbury (1), | 6. Stanford-in-the-Vale (31), |
| 7. Streatley (1), | 8. Thatcham Newtown (9). |

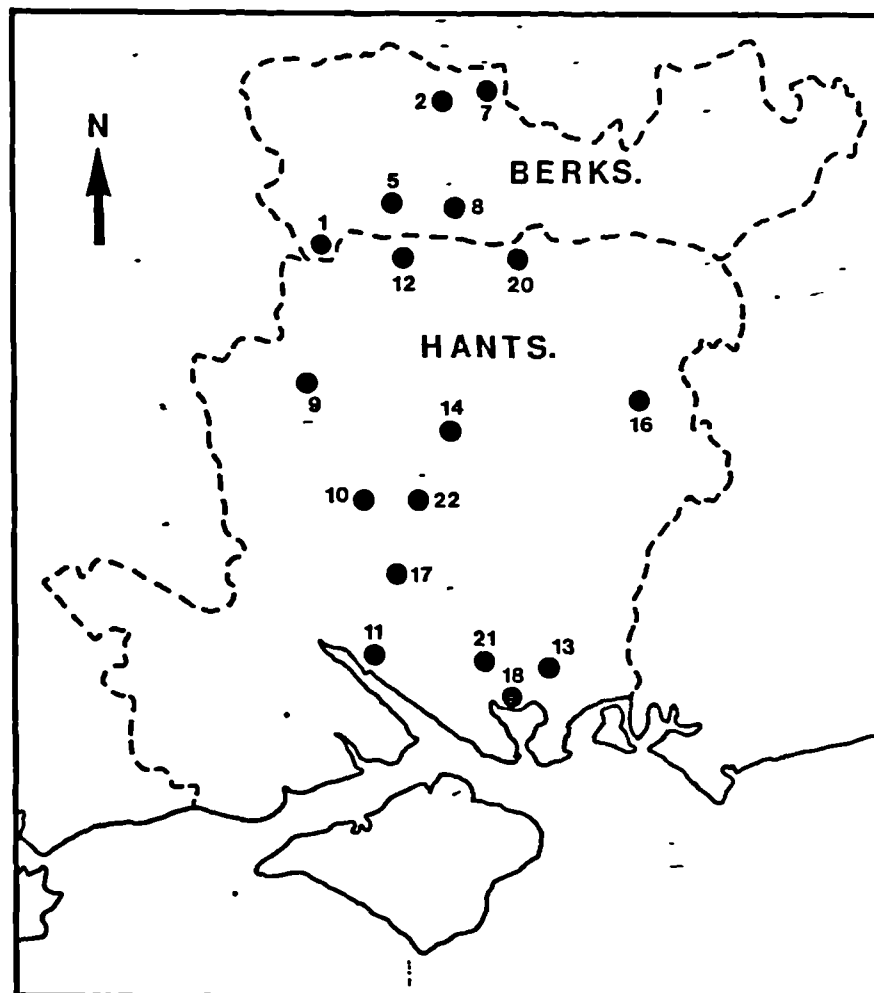


Fig.7:1 Map of sites and hoards in Berkshire and Hampshire. Scale 1:1,000,000

Hampshire

- | | |
|-------------------------|-------------------------|
| 9. Andover (4), | 10. Ashley Camp (14), |
| 11. Bitterne (41), | 12. Burghclere (1), |
| 13. Denmead (1), | 14. Micheldever (6), |
| 15. Mulberry (1), | 16. Neatham (215), |
| 17. Otterbourne (2), | 18. Portchester (9), |
| 19. Redbridge (11), | 20. Silchester (1,111), |
| 21. Wickham Bushes (6), | 22. Winchester (348). |

The locations of these sites are shown in figure 7:1; a map of the two counties. The site numbers, indicated above, correspond to their locations, shown on the map. The collections from these sites will now be discussed, in the same manner as in chapter 6.

Berkshire

Stanford-in-the-Vale (SU 3493)

This site, situated on Chinkham Hill, in the Vale of the White Horse, was a small settlement. Roman coins and Romano-British pottery have been recovered from the general area. The coins, held in collections at Reading Museum and Reading University, contain thirty-one barbarous radiates from this site.

A summary of the types present is given below, in figure 7.2. The most remarkable feature of the group is the very high proportion of Central Empire types, at 22.6% of the total. However, this may not be significant in so small an assemblage. Otherwise, relative proportions are in keeping with those previously described, from the west of England. Spes types dominate the Tetrican contingent. The proportion of minimi is high, at 41.9% of all examples, and in keeping with percentages recorded at the larger west country sites.

CENTRAL EMPIRE

Gallienus

Claudius II	1	
Divo Claudio - altar	4	12.9
- eagle	2	

	-	
TOTAL CENT. EMP.	7	22.6

GALLIC EMPIRE

Postumus

Victorinus

- Invictus
- Pax Aug
- Other

Total Victorinus	1	3.2
------------------	---	-----

Tetricus I and II

- Fides Militum	2	
- Hilaritas Augg		
- Laetitia	1	
- Mars Victor		
- Pax Aug	1	
- Pietas	2	6.5
- Salus Augg		
- Spes	6	19.4
- Victoria/Comes Aug		
- Virtus Augg		

Tet. I, uncertain rev.	3	
------------------------	---	--

Tet. II, uncertain rev.	-	
-------------------------	---	--

Total Tetrici	15	
---------------	----	--

Other types	1	
-------------	---	--

TOTAL GALLIC EMP.	17	54.8
-------------------	----	------

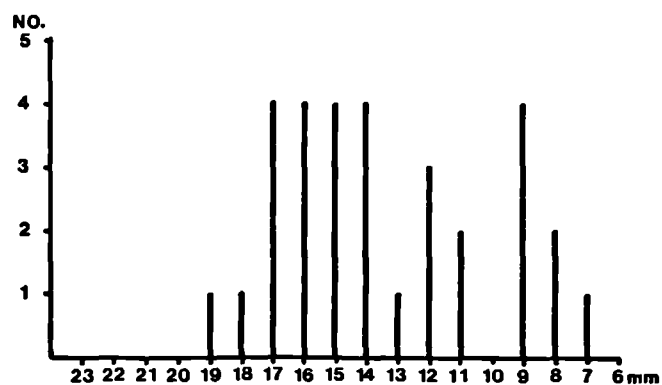
Uncertain minimi	6	
------------------	---	--

Unclassifiable	1	
----------------	---	--

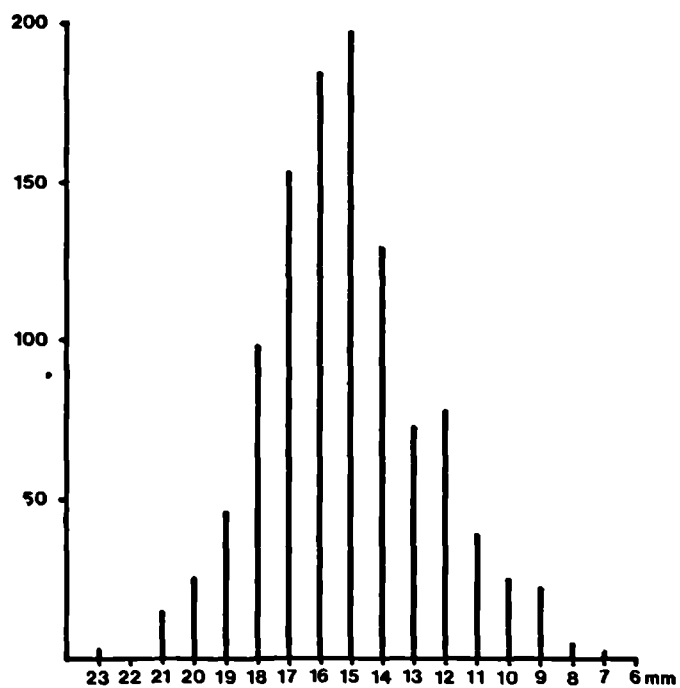
GRAND TOTAL	31	
-------------	----	--

Total minimi	13	41.9
--------------	----	------

Fig.7:2 Summary of types from Stanford-in-the-Vale



Stanford-in-the-Vale



Silchester

Fig.7:3 Coin diameters: Stanford-in-the-Vale and Silchester

The coins are all very worn and lack any obvious external or internal die- and style-links. The larger copies are unremarkable but the smaller types carry distinctive, bold, linear engravings. For example, catalogue number 7 had a boldly depicted eagle reverse, inaccurately reversed. Distinctive features are frequently picked out to the exclusion of minor detail, as in the case of catalogue number 11 (Laetitia), with a very bold wreath, and 14 (Pietas), with a large ewer. Inaccurate copying of detail and omission of legends is common. The flan of number 14 also exhibits the angular signs of clipping.

The diameters of the coins have been recorded in figure 7:3. The diagram shows no single peak. The overall pattern is indistinct, partly as a result of it being so small an assemblage.

Other Berkshire Sites

Berkshire lies within a triangle of major Roman sites; at Wanborough (Wiltshire), Dorchester on Thames (Oxfordshire) and Silchester (Hampshire). The county is framed by the major Roman roads which joined these towns. No large or small towns were situated within this triangle and no major coin collections have been located which originate from this area. All of the collections studied from Berkshire involve small numbers of coins from villas and minor settlements, of which Stanford-in-the-Vale is the largest. Material from seven smaller sites has been recorded and catalogued.

Coins have been recorded from the villas of Cox Green and Compton, where a villa may have existed in an area known as the Slade or Slad (Peake 1931, 105). The Maddie Farm settlement is represented and nine examples come from Thatcham Newtown, which

may have been the Roman station of Spinis, recorded in the Antonine Itinerary (Harris 1930), although that settlement may alternatively have been at Woodspeen further north (Rivet and Smith 1969, 462). The most interesting barbarous radiate recorded from these sites is a rare example of the Divo Claudio, Funeral Pyre variant (as RIC V: 256), from Thatcham (catalogue number 2). This is the first example encountered. The others are common types, all badly worn - as reflected in their catalogue entries.

Hampshire

The total of barbarous radiates recorded from Hampshire is 1,768; compared with just forty-nine site finds in the previous section. Three of the collections total over 200 examples. The civitas captials will be considered first, followed by a small town and then minor settlements.

Silchester (SU 6462)

The site of Silchester (Callewa Attrebatum) has remained almost completely free from building since the Roman period. This site was the subject of an attempt to uncover an entire Roman town plan, between the years 1890 and 1909. This work, under the auspices of the Society of Antiquaries, resulted in a very large coin assemblage - one of the largest for a Romano-British site. The Roman coins from Silchester were all catalogued by G.C.Boon, during February and March 1951 (Boon 1954). Mill-Stephenson originally produced a manuscript catalogue of the coins in 1910. In 1928 J.W.E.Pearce examined them and left a full list which was published in abbreviated form (Pearce 1929). Boon prepared his own catalogue because the original

ccir envelopes and cartons had begun to disintegrate, causing confusion within the collection. The catalogue lists some 12,500 coins (Boon 1974c).

Boon's listing of the barbarous radiates forms the basis of the identifications presented here, requiring the minimum of qualification. He followed Sutherland's reverse type classification, deciding at the time that 'size and style are not a safe basis for classification'. Boon's catalogue was divided into two sections. The main part includes the majority of coins, including those from his own excavations, and describes 845 barbarous radiates. The second section includes coins relating to the excavations of Joyce and his successors, down to 1890, and a further 203 barbarous radiates were listed.

In addition to the above coins, a small number of Silchester coins have been listed from other collections. Two come from the trays of the Heberden Coin Room, Oxford; five come from excavations undertaken in 1975 and a further fifty-two were collected from the surface, including from adjacent fields, by Mark Corney. The surface finds form a good-sized group, for comparison with the main collection. It is possible that the smallest examples were not recovered by field walking and that this collection is biased towards the larger types.

The barbarous radiates from Silchester, as summarised in figure 7:4, comprise the third largest site collection of these coins recorded for the current study. The total of 1,111 examples falls below only the totals for Richborough (2,026) and Colchester (1,302). The site was a civitas capital and was situated at the crossing point of major routes between London, in the east, and Dorchester, in the south west; and between Cirencester and the south coast sites of Chichester and Bitterne. It was anticipated at the outset that die-links may

	<u>C20</u>	<u>C19</u>	<u>Ash- mol.</u>	<u>1975</u>	<u>Sur- face</u>	<u>TOTAL</u>	
	NO.	NO.	NO.	NO.	NO.	NO.	%
CENTRAL EMPIRE							
Valerian	1					1	
Gallienus	5	2				7	0.6
Claudius II	2	4		1	1	8	0.7
Divo Claudio - altar	47	18		1	4	70	6.3
- eagle	18	5			1	24	2.2
- other	1	2				3	
Aurelian/Probus	<u>1</u>	<u>—</u>		<u>—</u>	<u>—</u>	<u>1</u>	
TOTAL CENT. EMP.	75	31		2	6	114	10.3
GALLIC EMPIRE							
Postumus	2	1				3	0.3
Victorinus							
- Invictus	31	5			2	38	3.4
- Pax Aug							
- Other	<u>16</u>	<u>8</u>			<u>—</u>	<u>24</u>	2.2
Total Victorinus	47	13			2	62	5.6
Tetricus I and II							
- Fides Militum	9	1			1	11	
- Hilaritas Augg	23	4			4	31	2.8
- Laetitia	12				1	13	
- Mars Victor	4	1				5	
- Pax Aug	105	15	2		7	129	11.6
- Pietas	31	5		1	1	38	3.4
- Salus Augg	66	7			3	76	6.8
- Spes	58	8			5	71	6.4
- Victoria/Comes Aug	15	8			1	24	2.2
- Virtus Augg	17	4				21	1.9
- Princ Ivvent	2					2	
Tet. I, uncertain rev.		5			3	8	
Tet. II, uncertain rev.	<u>2</u>	<u>3</u>			<u>—</u>	<u>5</u>	
Total Tetrici	344	61			26	431	38.8
Other types	<u>29</u>	<u>13</u>		1	<u>3</u>	<u>46</u>	
TOTAL GALLIC EMP.	422	88		2	31	543	
Uncertain minimi	63	26			10	99	
Unclassifiable	<u>285</u>	<u>58</u>	<u>—</u>	<u>1</u>	<u>9</u>	<u>353</u>	
GRAND TOTAL	845	203	2	5	56	1111	20.9
Total minimi	175	46			11	232	

Fig.7:4 Summary of types from Silchester

be found between the extensive collection of barbarous radiates from Silchester and these other sites. Collections from all of these other towns have also been studied and although they do not possess assemblages comparable in size to Silchester, it was hoped that the number present at the Hampshire site would enable some success.

The types present

The coins present at Silchester have been classified and arranged in the summary list, figure 7:4. In addition, fifty-two examples are illustrated in Plates 7:1 and 7:2. In figure 7:4, the totals are sub-divided into their five component collections, as discussed above.

By comparison with all other sites considered in this chapter, minims form a low percentage, at just 20.9% of the overall total. Perhaps surprisingly, the largest proportion of minims came from the nineteenth century excavations, with 22.7%, but this is below the percentage recorded for Neatham, Stanford-in-the-Vale and Winchester.

Some unusual types are present. A rare copy of Valerian was identified (catalogue number 1). All of the Gallienus copies carry clear signs of being irregular, as illustrated in Pl.7:2, 19. Pl.7:2, 20 has an obverse of Victorinus coupled with an animal reverse as used by Gallienus, showing a doe walking right (as RIC V: 176). Imitations of the Tetrican type Mars Victor (Elmer 794) are not common and one example is shown in Pl.7:2, 21. Number 22 is an interesting minim with a hybrid female figure on the reverse. Number 23 is illustrated in order to show what is meant by the term 'pin figure'.

G.C.Boon has discussed the question of the application of silvering to this coinage (Boon 1967, 123). One well-silvered

imitation was present and is shown in Pl.7:2, 24. Number 25 is a rare copy of the Consecratio, funeral pyre variety (as RIC V: 256). Number 32 is a copy of Postumus, with his Saeculo Frugifero reverse (winged caduceus; as RIC V: 84). The proportion of Postumus copies identified is remarkably small overall, at just 0.3% of the overall total. In contrast, the total of ninety-seven Divo Claudio copies forms 8.7% of the total. The altar version accounts for seventy of these and the vast majority are very close copies; not easily distinguishable from their prototypes. One other noteworthy copy (catalogue number 75) has a crude two-figure reverse. This minim lacks clear detail but is based upon an original of Aurelian or Probus. The presence of two copies of Tetricus II's Princ Ivvent (Elmer 781) is noted because this type is seldom identified on sites.

The sizes of the Silchester coins have been combined and plotted in figure 7:3. The shape of this graph is close to a classic bell-shape, with a peak at 15 mm. There is no appreciable separate, minor, peak for minims - as has been recorded elsewhere.

Die- and style-linking

Two copies of Tetricus I are shown in Plate 7:2, 27-8, which share a closeness of portrait style. Both have narrow foreheads and bulbous noses. The engraving is surrounded by a dotted border. Other coins referred to below are all illustrated in Plate 7:1. Numbers 7, 8 and 9 are Victorinus copies; sharing thin engravings and all using the Tetrican variety of Pax Aug reverse (with vertical sceptre). They are stylistically similar. Numbers 10, 11 and 12 all employ an

unusual eye in the obverse portrait; the nose is arched and loops round into the eye brow. The eye forms a concentric loop inside the eye brow/nose junction. These three engravings appear to share a similar influence. Numbers 13, 14 and 15 - of different sizes - all show very crude portraits with a convex nose arch. These again seem to share a common influence.

A group of seven obverses of Tetricus I are shown; numbers 16-22. The facial engravings are all rounded and share similar proportions between beard, nose, forehead and cheek. Numbers 20-22 are particularly similar in appearance. Another Tetrican group, this time Tetricus II, is shown (numbers 30-33). These are all Pax Aug types of similar obverse/reverse style and identical size. Two other Tetricus I copies, numbers 40* and 41, share similar obverse engravings.

The small groups of coins described above all appear to show features suggesting that a common origin is possible. Each of these groups carries traits unlike anything recorded elsewhere. Although no overwhelming evidence for a local style or styles could be identified permeating the Silchester collection as a whole, these minor groups may point to a degree of local production. It is clear that the coin in use at Silchester was not being supplied by a single local mint, from the degree of variety observed. The products of any local mints were well mixed with other coin brought to the site from outside. The degree of external linking, with other sites, can now be reviewed.

The coins described below are again illustrated in Plate 7:1. Numbers 1 and 2 are Tetricus I, Pax Aug copies and are similar to another found at Cirencester (Pl.6:2, 6). Numbers 4, 5 and 6 are Divo Claudio, eagle, types. They are considered

a group because of the angle of the nose, size and reverse engraving treatment. A similar example was found in the Beachy Head (1973) hoard (Bland 1979) and is illustrated here, as number 3. Another similar example was found at Redbridge, Hants, and is shown in Pl.7:2, 17. Four examples of H.B.Mattingly's Invictus/Ewer group have been encountered at Silchester and are illustrated here, as numbers 23-6. The first two are based on the Invictus reverse and number 26 carries a large ewer, while number 25 is uncertain. The obverses of 23-5 are typical, with the angular faces and dashed legends but number 26 has an unusual facial style and is possibly a derivative form. In chapter 6, two minim copies of Claudius II were described and illustrated in Pl.6:2, 1-2. Another example is present at Silchester, shown as number 28. A further style-link with Cirencester may be shown by the engraving of number 27. Although different in outward appearance, the very free style and long hair is also seen in Pl.6:2, 10. One coin (number 29) has been classified as a Tetrican Pax Aug type but the figure carries a caduceus (as in the Felicitas figure). This oddity was similarly recorded on a Winchester coin (Pl.7:4, 22), which also lacks a reverse legend and employs a similar engraving style. Plate 7:1, 34 shows a distinctive engraving with a long straggly beard. Two similar examples have been recorded from the Hollingbourne, Kent, hoard (to be described below in chapter 10).

The links above are interpreted from stylistic similarity. A single external die-link has been identified. Number 31 is a good, clear, Tetricus I, Pax Aug, copy. It shares obverse and reverse dies with a site find from Richborough. Another minim, not illustrated here, is a very close style-link with an

example from the Allington hoard - again from Kent (Davies 1982a, pl.1, 17-18). In the report on the Richborough imitations, attention was drawn to a series of copies of Tetricus II, with pronounced jaws (Davies 1982b, Pl.1, 13-15). Another example was found at Silchester (number 36), shown alongside yet another example - from Verulamium (number 37).

Number 38 is a crude copy with pointed nose, dashed legend, dotted border and a striking restricted to the top right portion of the die-impression. Another very similar example has been found at Canterbury (see chapter 10), reinforcing the observed link with Kent sites and hoards. Number 39 is reminiscent of a group from Winchester (Pl.7:4, 27-8). Finally, number 42 is a very bold copy of Oriens, showing the sun god striding left. Although it is not extremely close in style, an example with comparable features was recorded in the hoard from Paternoster Row in London (chapter 10).

A coin mould found at Silchester

One further significant find has been made at Silchester. During excavations within the area of the Forum-Basilica, one half of a lead mould for the apparent casting of irregular radiate issues was discovered (Fulford 1982b). This is illustrated in Plate 7:3. This mould is an irregularly shaped slab of metal; thought to be mainly lead. It has a diameter of 5 cm at its widest point. In the approximate centre is a depression where the coin would have been cast and a channel runs into this, for pouring molten metal. There are two protrusions; above and below the central depression, which would have engaged the upper half of the mould. A plaster cast has been taken from the mould, which shows the impression to have been a reverse type used by the Tetrici, showing Spes.

Previously discovered counterfeiters' moulds, such as those from Whitchurch (Boon and Rahtz 1966), were prepared by taking an impression from a regular antoninianus. The Silchester example was either an impression from another irregular coin or was engraved straight into the metal. Analysis of the metal should eventually reveal which is the most likely.

The moulds discovered at Whitchurch were much lighter in weight, made from pink and grey clay. They were thinner. Moulds of similar appearance and date have also been found in France. A number were discovered at Lyons and are now held at Rouen Museum (Turcan 1982; see also Plate 7:3). These are more substantial clay moulds. Pins projected from the obverse half of each mould, which inserted neatly into a recess in the adjoining reverse. These moulds were obviously stacked in piles. In the absence of similar features, it is unlikely that the Silchester example would have been part of a stack.

It is uncertain whether this unstratified find was used at Silchester. Other scrap metal was found in the basilica (Fulford 1982) and it is possible that this mould was to be melted down. Whether coin production was practised within the Silchester basilica cannot be proven. However, another kind of evidence for barbarous radiate production from a similar context was discovered in France, at Heidenkopf (Gallia 1976, 368-9). Here, metal rods and blank coin flans were also found inside a basilica building.

The casting of irregular antoniniani was a a phenomenon which can generally be associated with the earlier years of barbarous radiate production (Boon and Rahtz 1966). However, the impression of a very crude Spes figure on the Silchester mould is more akin to irregular coins belonging to the main

years of the coinage. It is thought likely from the style of the impression that the Silchester mould would have been made during the early to mid-270's.

Conclusion

The types present from the component collections used here present a fairly consistent picture; summarised in figure 7:4. Minims form only a small proportion of the assemblage, at just over 20%, even when the fieldwalking finds are discounted. This is a contrasting picture to that consistently recorded from sites to the west, in Chapter 6.

Some small groups which appear to represent internal style-linking have been presented. They do not represent a high proportion of the total site finds. The types of stylistic similarity encountered are not easy to define but the small groups do possess characteristics peculiar to coins from this site. The probability of limited local production is suggested, although there is no major, dominant, local style. The stylistic links are restricted to coins of larger module, to the exclusion of minims.

Overall, the Silchester collection is rich in its diversity of types and styles; as was expected from this site, with its central location in relation to other major sites. Style-links, and a solitary die-link, have been found from Cirencester in the west, to London and Kent in the east, embracing both site and hoard finds. These links reflect a wide circulation of this coinage, right across the province. They also reflect the wide contacts between this site and other towns.

Winchester (SU 4829)

A grand total of 348 barbarous radiates have been recorded and studied from the site of Winchester. These come from three separate collections. The more recent examples from the Winchester Excavation Committee, which form 85% of the coins studied, are to be the subject of a forthcoming report by H.B. Mattingly (Mattingly forthcoming). It is noted that Mattingly lists 368 examples from that source, while only 298 of those coins have been studied here. A further forty-seven examples were recorded from Winchester City Museum; which relate to earlier excavations in the City. Three examples come from a private collection. Winchester (Venta Belgarum) was a civitas capital, with links by road to Silchester, Bitterne and Chichester.

The types present

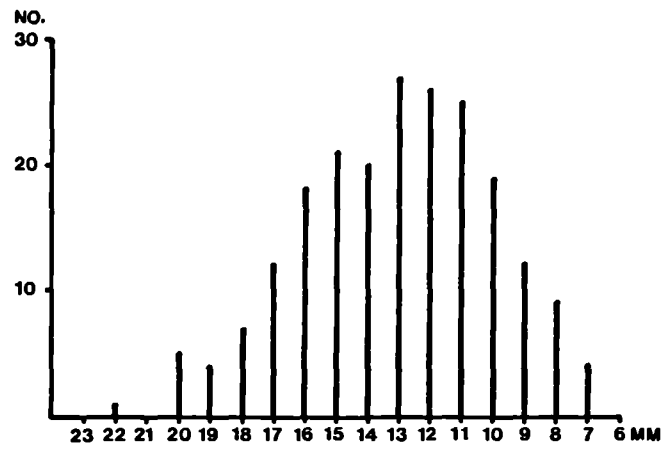
All coins studied have been summarised together, below, in figure 7:5. A particularly low proportion of Central Empire types have been identified. The percentage of minimi is high and in keeping with the values recorded from western sites, in the previous chapter. The most numerous Gallic Empire types are Pax, Salus, Spes and Invictus. The coin diameters are summarised in figure 7:6. Most fall within the range 13-17 mm, while the extremes range between 21 mm and 7 mm.

Die- and style-linking

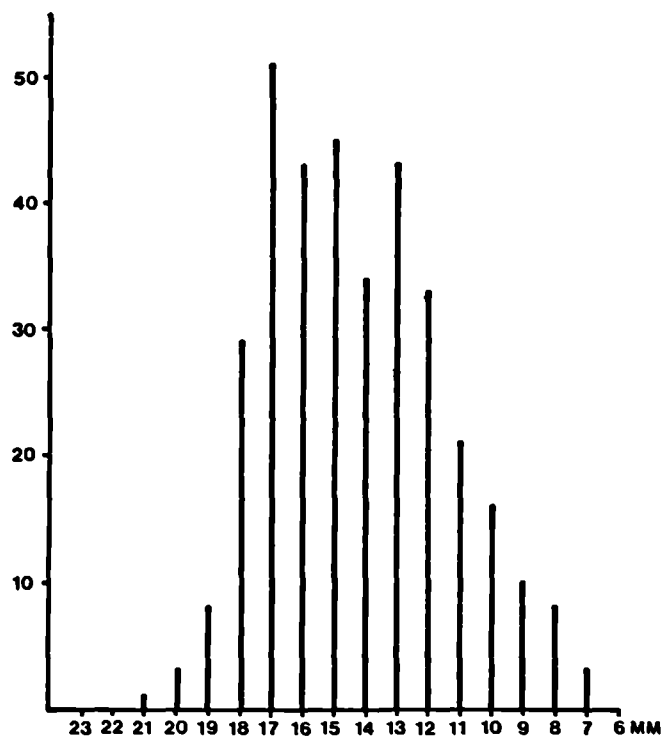
Mattingly has noted the absence of credible mint groupings at Winchester, and remarked upon the 'bewildering multiplicity of types of copy' (Mattingly forthcoming). However, the presence of several minor style-groupings is suggested here. Thirty-

CENTRAL EMPIRE	NO.	%
Gallienus		
Claudius II	4	
Divo Claudio - altar	14	4.0
- eagle	2	
	—	
TOTAL CENT. EMP.	20	5.8
GALLIC EMPIRE		
Postumus	2	
Victorinus		
- Invictus	20	5.8
- Pax Aug	1	
- Other	3	
Total Victorinus	24	6.9
Tetricus I and II		
- Fides Militum	6	
- Hilaritas Augg	2	
- Laetitia	6	
- Mars Victor		
- Pax Aug	39	11.3
- Pietas	13	3.8
- Salus Augg	16	4.6
- Spes	23	6.6
- Victoria/Comes Aug	1	
- Virtus Augg	5	1.4
Tet. I, uncertain rev.	14	
Tet. II, uncertain rev.	<u>1</u>	
Total Tetrici	126	36.4
Other types	<u>29</u>	
TOTAL GALLIC EMP.	181	52.3
Uncertain minimi	97	
Unclassifiable	48	
GRAND TOTAL	<u>346</u>	
Total minimi	134	38.7

Fig.7:5 Summary of types from Winchester



Neatham



Winchester

Fig.7:6 Coin diameters: Neatham and Winchester

five Winchester coins are illustrated in Plate 7:4.

Five of the coins illustrated, numbers 24 and 27-30, are large copies of Pax Aug, with diameters between 16 mm and 19 mm. Obverse engravings share the characteristics of a straight nose, which continues up across the forehead. Numbers 27-30 have large eye sockets. Flans are worn but are generally circular. These examples are considered unusual enough to be a potential group. Numbers 11-14 are copies of Tetricus II, again unusual enough to be grouped together. They share the feature of a long, straight nose and have a diamond-shaped face. The first three are Pietas, sacrificial implements, copies and measure between 13 mm and 15 mm in size. Numbers 6 and 7 are minims, sharing similar facial engravings. The shape of the head and nose are similar and both carry the unusual bubbly hair and beard treatment.

A further collection of five Tetricus I copies (numbers 17-21) carry longer faces and prominent pointed beards. These can be grouped together for comparative purposes. The coin illustrated in Plate 7:4, 35 is very close in style to a coin from the St Mard I hoard from Luxembourg (Lallemant and Thirion 1970, plate 15, 3908), although it does not die-link. In fact, no die-links have been found with other collections, which is disappointing from such a large collection. However, three coins possess the familiar characteristics found in Mattingly's Invictus/ewer group. These measure between 13 mm and 15 mm. Two are shown in Plate 7:4, 8 and 10, which have ewer and Invictus reverses, respectively. These are not very close in style to the main group but may represent local derivatives of the main type. These examples possess thin, scratchy, engravings and lack legends.

There are other coins present worthy of description. Four

copies, which possess very different engraving styles, share the very unusual characteristic of a crudely engraved square-shaped head (numbers 1-4). Other types include number 33, which is listed in the catalogue as a 'design reverse'. Unusual varieties of Pax Aug are shown in the Plate (numbers 5, 22 and 23). Numbers 25 and 16 are minim types, lacking legends. Number 31 is an unusual interpretation of the Divo Claudio, eagle, type. Copies of this issue are generally closer to the original engraving style and seldom approach the freedom of engraving shown here. Number 34 is an obverse of a Postumus copy. Number 44 has been assigned to Victorinus, because of the portraiture, but carries the reverse of Pax Aug, with vertical sceptre, as used by the Tetrici.

Conclusion

It is disappointing, and somewhat unexpected, that no die- or close style-links have been found with other collections studied. Also, instances of good internal style-linking were absent, although some small groups have been described which share unusual characteristics not encountered on other sites. Such features may be indicative of a local origin. Such groupings have mainly involved the larger coins and no such groups have been found within the minim component, despite the large percentage of these present. In general, the degree of wear encountered on these coins has made this work very difficult.

Neatham (SU 7441)

Neatham was a Romano-British small town. The site is situated on the River Wey, to the north-east of modern Alton. The town

stood at the junction between Roman roads from Silchester to Chichester and from Winchester to London. All of the coins recorded here come from excavations carried out between 1969 and 1976. The excavations are the subject of a recent monograph (Millett and Graham 1986).

The types present

Two hundred and fifteen barbarous radiates have been listed from Neatham. The earliest types represented within the assemblage are those of the sole reign of Gallienus (AD 259-68), while no examples are based on issues later than the Tetrici, or possibly Tacitus (AD 275-6). All examples appear to have been struck and not cast, although tell-tale signs of casting may have been obscured by wear in circulation. In almost all cases flan size was too small for the dies used, with either all or part of the legends missing. Others, especially minims, lack legends completely. Only some thirty coins above minim size have well-shaped flans, while the rest are highly irregular in shape.

These coins vary widely in size between 22 mm and 7 mm diameter, with 84% falling within the limits of 17 mm and 9 mm and with 46% between 14 mm and 11 mm inclusive. The high proportion of minims, at almost 58%, is noteworthy and the graph in figure 7:6 contrasts with those for the previous sites described in this chapter. This graph does not possess the double peak seen at sites in the previous chapter. The single peak is at 13 mm, which is very unusual for a site collection, and shows minims to dominate the assemblage. This high percentage may reflect coin recovery rate, to some extent, although the pattern must still be carefully compared with those for other sites.

CENTRAL EMPIRE	NO.	%
Gallienus	2	
Claudius II	2	
Divo Claudio - altar	7	3.3
- eagle	5	
	—	
TOTAL CENT. EMP.	16	7.4
GALLIC EMPIRE		
Postumus	2	
Victorinus		
- Invictus	11	5.1
- Pax Aug		
- Other	<u>5</u>	
Total Victorinus	16	7.4
Tetricus I and II		
- Fides Militum	3	
- Hilaritas Augg	4	
- Laetitia	2	
- Mars Victor	5	
- Pax Aug	32	14.9
- Pietas	10	4.7
- Salus Augg	9	4.2
- Spes	14	6.5
- Victoria/Comes Aug	3	
- Virtus Augg	4	
Tet. I, uncertain rev.	6	
Tet. II, uncertain rev.	<u>3</u>	
Total Tetrici	95	44.2
Other types	<u>6</u>	
TOTAL GALLIC EMP.	119	55.3
Uncertain minimi	68	
Unclassifiable	<u>12</u>	5.6
GRAND TOTAL	215	
Total minimi	124	57.7

Fig.7:7 Summary of types from Neatham

A breakdown of the types present is shown in figure 7:7.

The sixteen coins of the Central Empire form 7.4% of the assemblage, while 87% are Gallic Empire derivatives. Tetrican types comprise 44.2%. Two Postumus copies are present; one being an interesting version of Laetitia Aug, of the Cologne mint, depicting a galley, right (from Elmer 130). This is illustrated in Plate 7:5, 4. The Invictus reverse predominates under Victorinus, with 5.1%, as does Pax under the Tetrici, with 14.9%. There are five examples of Mars, walking right to left, with a diagonally held spear. Sutherland recorded this type, which is not commonly copied, and allocated it to Tacitus' Mars Ultor (RIC V: 108) (Sutherland 1937, 136). However, it is probable that these examples derive from Tetricus I's Mars Victor (Elmer 794).

Internal linking

There are no examples of die-linking within this collection but some interesting groups of coins are present. Two coins of similar size portray an elongated version of Tetricus II's face and contrast with the usual, more cherubic, countenance. These are shown in Plate 7:5, 13 and 14. A style-group of five coins is illustrated in Plate 7:5, 23, 27-9 and 35. Each of these examples, with regular-shaped flan of 16 mm diameter, represents Tetricus I, but with an uncharacteristic face and bulbous nose. A further example of this type was found at Shakenoak in Oxfordshire (Pl. 8:2, 8). Another group of four coins possess stylised heads of Tetricus I, with pointed features (three examples are illustrated in Plate 7:5, 24-6).

Another group of coins, though not a style-group, contains coins all of which are so distinctly crude that they have been considered together (numbers 5-12). In fact certain

characteristics are shared. Where legends remain, they are made up of the symbols 'VIA' and are totally illiterate. Obverses merely bear approximations to faces, lacking obvious prototypes. Engravings are scratchy. They can all be considered examples of local production, possibly from the same untrained hand.

Six minims are illustrated and are presented in two groups. The first three coins depict Tetricus I, employing a distinctive engraving technique (Plate 7:5, 17-19). The second group depicts Tetricus II and the plain faces with long, wavy, locks of hair are of similar style (Plate 7:5, 20-22). All six examples are distinctive and are totally different from minim styles seen in other areas; for example in the Verulamium Theatre hoard (Wheeler 1937) and in the Sussex minim hoards (Mattingly 1964 and 1967b). It seems likely that these minims are also the result of local production.

External die- and style-linking

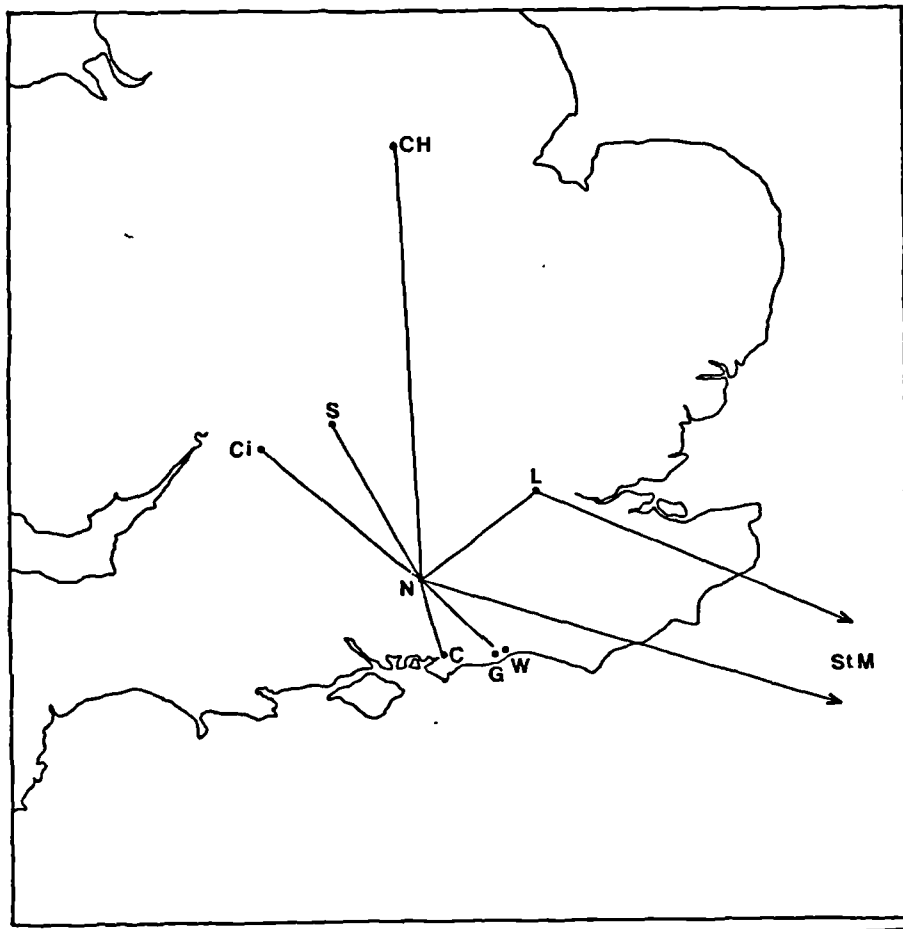
Although it was a small town, Neatham was a route centre, on two major Roman roads and so would be expected to have had vigorous contact with the other sites on these routes. The possibility of locating die- and style-links with other collections was expected to be high.

Four coins belong to groups established by H.B. Mattingly. The first two are minims; unfortunately suffering from corrosion (Plate 7:5, 30-1). They closely resemble two of the die-linked groups in the hoard from Mill Road, Worthing (Lewis and Mattingly 1964, Plate 17, 24-30). One example also has a comparable geometric reverse but the second is illegible in this respect. The other two coins strengthen the link with the

Sussex hoards and are illustrated in Plate 7:5, 32-3. They are examples of Mattingly's Pax Aug group. Thus, there appears to be a connection with the mint which produced large numbers of coins found in the Sussex hoards and at Calverton (Nottinghamshire) and which Mattingly places in the Midlands (Mattingly 1963, 22).

The reverse of a second copy of postumus die-links with a coin found at Chichester. The obverses are based on Victorinus but the reverses copy the Oriens Aug type of Postumus (Elmer 568/9, from Cologne). They possess the correct mint mark 'P', in the left field. The Neatham example (Plate 7:5, 15) is larger than the Chichester coin (Plate 7:5, 16) which was struck on a flan 5 mm smaller. One other link presented is with the town of Cirencester. The Neatham coin (Plate 7:5, 34) bears a close similarity to the simplified, pointed obverse style of the latter (also shown - in Plate 6:1, 22).

A most interesting coin found at Neatham belongs to a group present in three recorded hoards, and is shown in Plate 7:5, 36. The obverse has a well-engraved and distinctive bust of Tetricus I and the reverse carries the Laetitia figure, which has been wrongly coupled with the legend SALVS AVGG. The writer has recorded two further examples in the Paternoster Row (Newgate Street) hoard from London, and which are illustrated here in Plate 7:5, 37-8 (this hoard was published by Mattingly, 1967b). The first of these examples suffers from a blurred striking but is very similar. There are two further examples of this type illustrated in the publication of the Saint-Mard I hoard from Luxembourg. A single example comes from each of the Saint-Mard I and Saint-Mard II hoards and they share a reverse die (Lallemand and Thirion 1970, Pl.B, 15/3901). The Saint-Mard II example shares the Tetricus I obverse of the English



N = Neatham

CH = Calverton Hoard

G = Goring-on-Sea Hoard

S = Shakenoak

W = Worthing Hoard

Ci = Cirencester

St M = St Mard Hoards

C = Chichester

L = London

Fig.7:8 Neatham - map of all links

coins but the Saint-Mard I coin carries the portrait and obverse legend of Tetricus II. These coins provide a further valuable example of cross-Channel linking and reinforce the small number of such links previously recorded for the barbarous radiate series. The importance of these links will be discussed further in chapter 11.

The die- and style-links encountered clearly show the wide circulation of this coinage. It is also seen that no single, local, mint was supplying the site with the bulk of its coin requirement. It is possible to say that coin used on the site was acceptable right across the province of Britain and also into Gaul. The links from Neatham to other sites have been summarised in figure 7:8.

Bitterne (SU 4513)

The coastal site of Bitterne (Claesentum) was situated on Southampton water. It had major road links to Winchester and Silchester inland, to the north, and to Chichester, in the east. There were also sea links with Gaul. A total of forty-one barbarous radiates have been recorded from this site. Although this is not a large collection, it was hoped that the extensive lines of communication might have resulted in die-links with other sites being present. The coins come from four different collections. Twenty-four were excavated at Bitterne Manor. Six come from Waterman's excavations of 1939. Ten come from Cotton and Gathercole's excavations of 1951-54 and one other is from a private collection.

The types present

A summary of types present is given below in figure 7:9. Ten of the coins are illustrated in Plate 7:2. The small number of

CENTRAL EMPIRE	NO.	%
Gallienus	2	
Claudius II	2	
Divo Claudio - altar	3	7.3
- eagle		
TOTAL CENT. EMP.	7	
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	1	2.4
- Pax Aug		
- Other	<u>1</u>	
Total Victorinus	2	4.9
Tetricus I and II		
- Fides Militum	1	
- Hilaritas Augg		
- Laetitia	1	
- Pax Aug	14	34.1
- Nobilitas	1	
- Pietas	1	
- Salus Augg	3	7.3
- Spes	4	9.8
- Victoria/Comes Aug		
- Virtus Augg	1	
Tet. I, uncertain rev.		
Tet. II, uncertain rev.		
Total Tetrici	26	
Other types	<u>2</u>	
TOTAL GALLIC EMP.	30	73.2
Uncertain minimi	3	
Unclassifiable	1	
GRAND TOTAL	41	
Total minimi	11	26.8

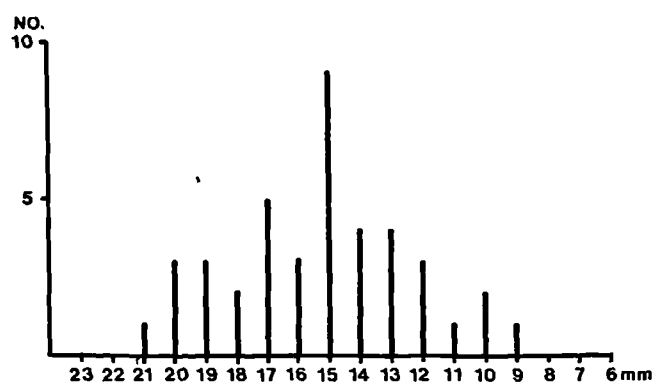
Fig.7:9 Summary of types from Bitterne

coins makes comparison of percentages with other sites less significant. However, the proportion of minims is lower than for other Berkshire and Hampshire sites, apart from Silchester. The proportion of Central Empire types is high, at 17.1%. Coin sizes range between 21 mm and 9 mm, with a peak at 15 mm, as shown in figure 7:10. Engravings are, in general, bold and crude, as epitomised by example 8 in the Plate.

Number 1, in Plate 7:2, is a very clear copy of Gallienus' animal reverse series, representing a stag, left, as in RIC V: 178. This coin is of interest because Gallienus copies are rare among minims generally. Coins 2 and 3 are large, bold, copies of Pax Aug. Number 4 has an obverse very similar to that of Mattingly's Pax Aug. group. Other distinctive copies include number 6, with an angular engraving and illiterate legend; number 7, which is a small engraving on a large 16 mm flan; number 8 which has a high relief; number 9, which is a better copy of Victorinus and number 10, which is another very crude copy.

Die- and style-linking

The most interesting coin present is number 5 on Plate 7:2. This copy of Tetricus I has an unusual Nobilitas Augg reverse, as struck at Trier (copy of Elmer 795). This coin has an obverse with a very similar style to a Winchester coin, shown in Plate 7:4, 23. A common origin is suggested. More significantly, the Bitterne coin shares an obverse die with a coin found in a hoard from Paris - the Parvis, Notre Dame hoard (Giard 1983a, Plate 2, 120). This link serves to reinforce the small but growing number of continental die- and style-links known. It will be considered, together with the other examples, in chapter 11.



Bitterne

Fig.7:10 Coin diameters: Bitterne

The suggested link with Winchester and with the Parisian hoard reflect the lines of communication of this coastal site, despite the small size of the coin assemblage. Some of the smaller sites from Hampshire will now be compared.

The smaller Hampshire sites

The barbarous radiates from ten minor Hampshire sites have been recorded and are fully listed in the catalogue. Of these, only Ashley Camp and Redbridge yielded more than ten coins apiece. Eight of these coins are illustrated in Plate 7:2.

Four examples from Ashley Camp are shown (numbers 11-14). Number 11 is a Tetrican copy, with high relief portrait and a sacrificial implements reverse. A mint mark - a reversed letter 'C' - is present in the exergue. This letter is not part of the legend, which is otherwise accurate. Numbers 12-14 carry very crude engravings, with the letters A and V visible. These may be poor local copies. The types present are those more commonly encountered on the larger sites.

Two coins from Otterbourne are illustrated (numbers 15 and 16). The first is a good copy of Tetricus II, Spes Augg and the second is a poor Tetricus I, Salus? copy. Finally, two coins from Redbridge are shown (numbers 17 and 18). Number 17 is a Divo Claudio copy on which the Claudian portrait bears a prominent pointed nose. The reverse carries an elongated eagle. Number 18 is a poor, basic, copy. It resembles the very crude coins from Neatham described above and shown in Plate 7:5, 5-12. This example is a reversed engraving of Victorinus' Invictus reverse and shows a star in the field, right.

Berkshire and Hampshire - a summary

A summary of the main irregular coin types present within the five largest collections studied in this chapter is shown below in figure 7:11. The main types represented are those which were also seen to predominate in the previous chapter; namely Pax Aug., Salus Augg and Spes for the Tetrici and Invictus for Victorinus. The Divo Claudio, Consecratio type is the most frequently encountered Central Empire type. The overall percentage of Central Empire coin varies between 5.8% at Winchester and 22.6% at Stanford-in-the-Vale. Apart from Silchester, where a high number of unclassified coins has reduced the number, Gallic Empire coins account for between 74.2% and 87.0% of assemblages.

At the three sites of Stanford-in-the-Vale, Winchester and Neatham, minims form an appreciable component of assemblages, at over 38%. Their percentages compare with those recorded in the previous chapter, for the larger, excavated western collections. Of the other sites, Bitterne has just 26.8% minims and Silchester just 20.9%. Size graphs (figures 7:3, 7:6 and 7:10) do not show a dual peak, as was recorded for sites in chapter 6.

The absence of good, close, internal style- and die-linking has been a disappointment. However, evidence of unusual traits among small groups of coins does suggest that some degree of local production took place at the larger sites, although this does seem to be restricted to the larger coins. External links have been recorded at the large centrally located sites, Silchester and Neatham. Their links are not restricted to any specific part of the province but are found to flow in all directions, along lines of communication. Winchester, Neatham and Bitterne have all turned up more links with French

	STANFORD-IN-THE-VALE	NEATHAM	WINCHESTER	BITTERNE	SILCHESTER
TOTAL CENT. EMP.	22.6	7.4	5.8	17.1	10.3
Divo Claudio	19.4	5.6	4.6	7.3	8.7
TOTAL GALL. EMP.	54.8	55.3	52.3	73.2	48.9
Tot. Victorinus	3.2	7.4	6.9	4.9	5.6
Invictus	-	5.1	5.8	2.4	3.4
Tot. Tetrici	48.4	44.2	36.4	63.4	38.8
Pax	3.2	14.9	11.3	34.1	11.6
Salus	-	4.2	4.6	7.3	6.8
Spes	19.4	6.5	6.6	9.8	6.4
TOTAL MINIMI	41.9	57.7	38.7	26.8	20.9
ASSEMBLAGE COIN TOTAL	<u>31</u>	<u>215</u>	<u>346</u>	<u>41</u>	<u>1111</u>

Fig.7:11 Barbarous radiate types from sites in Berkshire
and Hampshire

collections and, together with that from Colliton Park (chapter 6), point to regular contact between the south coast and Gaul.

Mattingly's die/style-groups have again been represented on sites, showing these types and their derivatives to have been truly ubiquitous. The new examples are summarised below.

	<u>Invictus/Ewer group</u>	<u>Pax Aug group</u>
	<u>and derivatives</u>	
Silchester	4	-
Winchester	3	-
Neatham	-	2
	----	----
Total	7	2

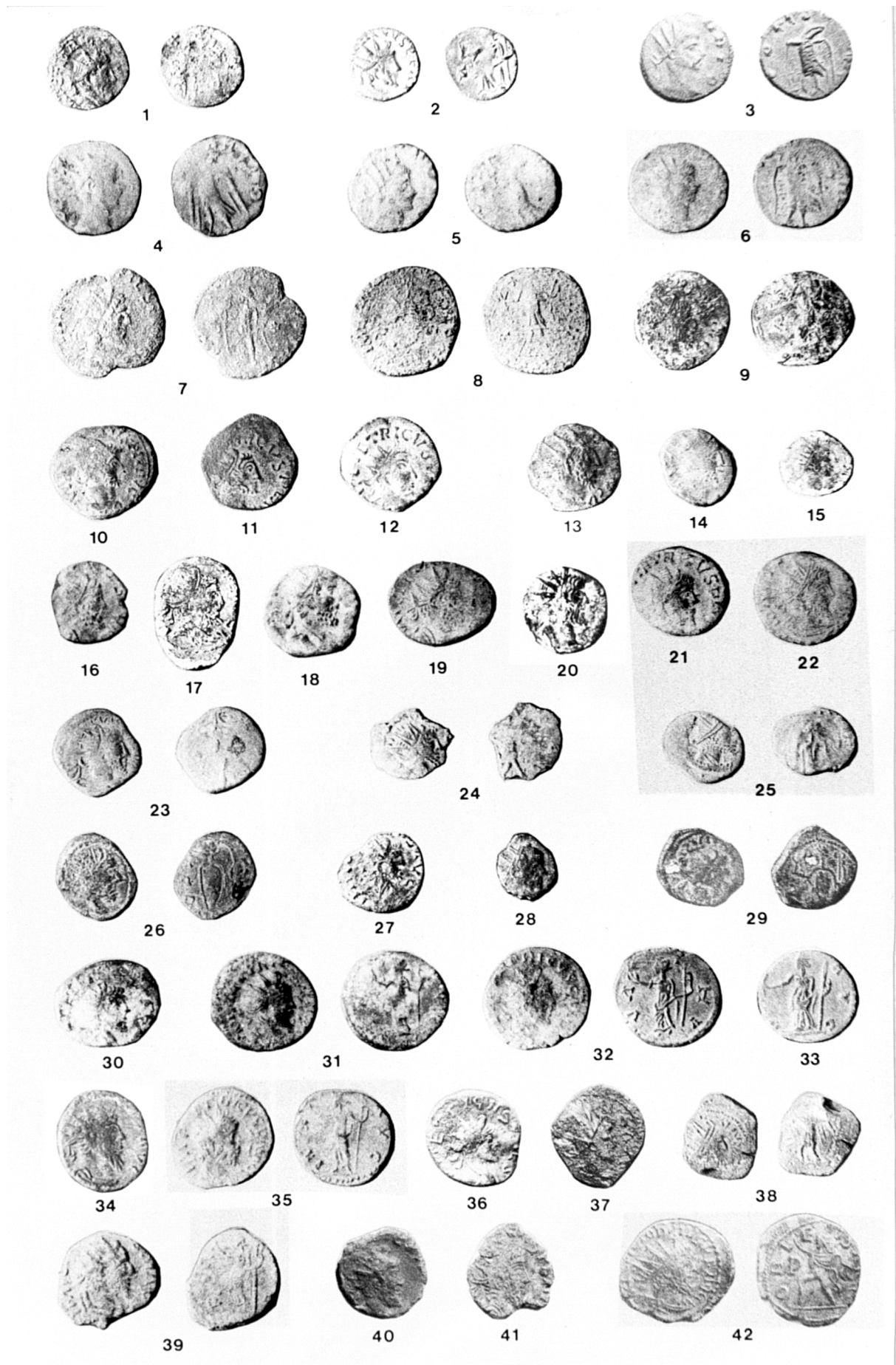


Plate 7:1 Silchester. Scale 1:1

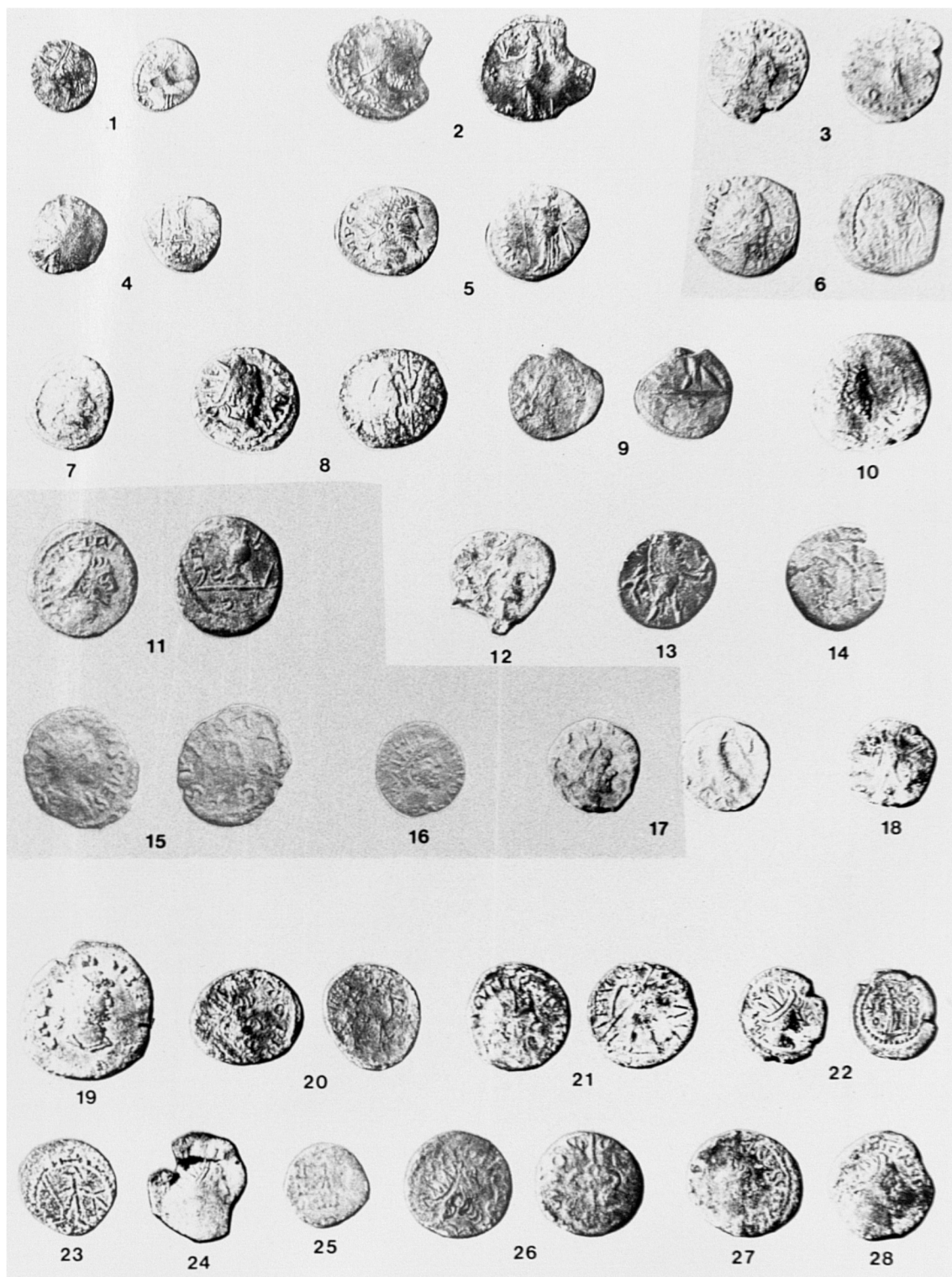
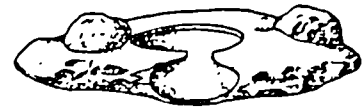
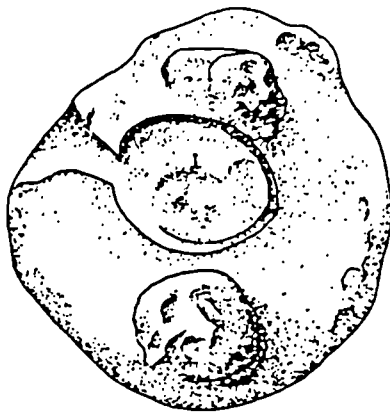
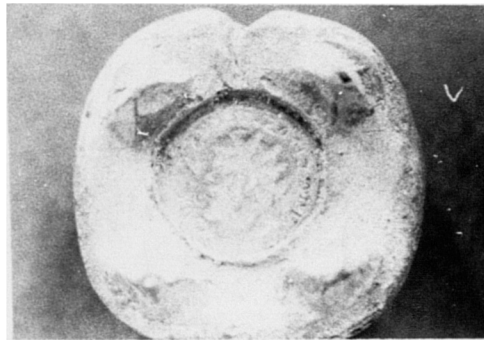


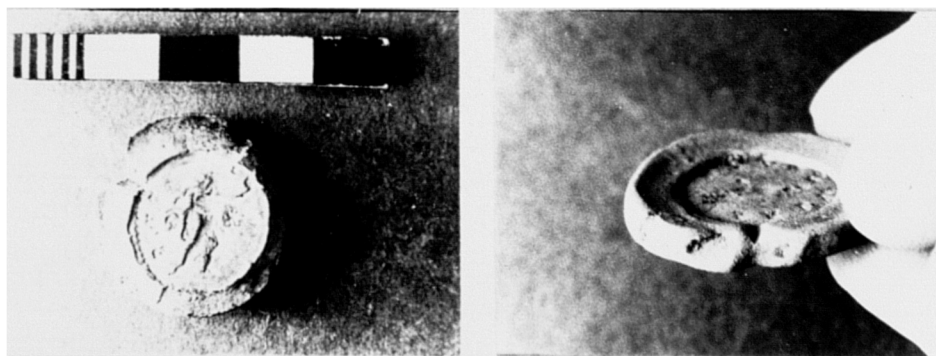
Plate 7:2 Bitterne, Ashley Camp, Otterbourne, Redbridge and Silchester. Scale 1:1



Silchester coin mould



Rouen coin mould



Whitchurch coin mould

Plate 7:3 Coin moulds from Silchester, Rouen and Whitchurch.
Scale 1:1

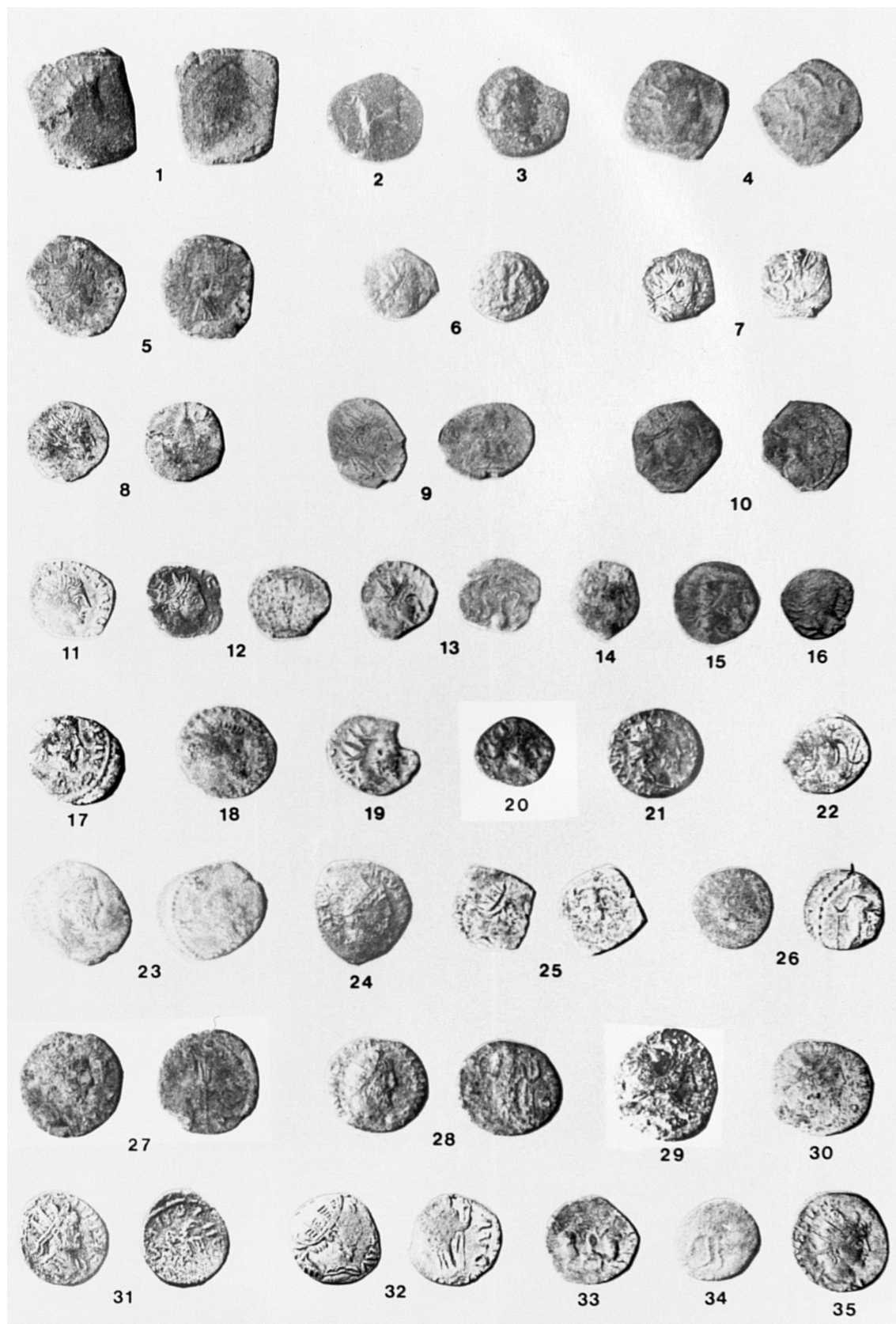


Plate 7:4 Winchester. Scale 1:1

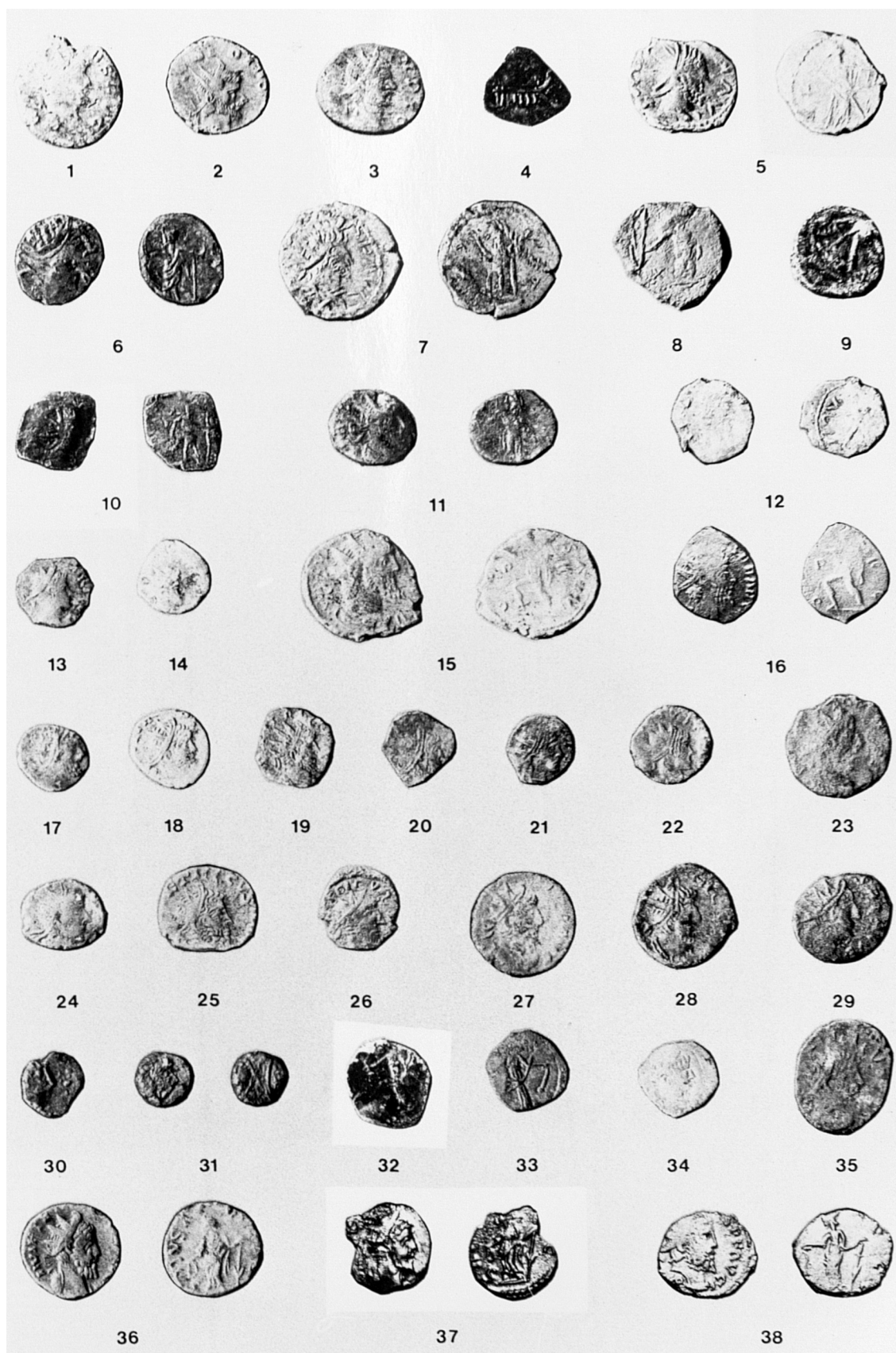


Plate 7:5 Neatham. Scale 1:1

Chapter 8. Oxfordshire, Buckinghamshire and Hertfordshire

Oxfordshire, Buckinghamshire and Hertfordshire comprise a land-locked group of counties in the centre of southern England. This is the only one of the five areas studied in chapters 6-10 which does not have a coastline. These counties contain the northernmost sites included in the overall study.

Almost 1,400 barbarous radiate site finds have been studied from these counties. Coins from twenty-three sites have been recorded from Oxfordshire, which total 469. Eleven Hertfordshire sites are represented, which have yielded a total of fifty-eight coins. The largest county total is from Hertfordshire, the bulk of which comes from excavations at Verulamium. Coins from five other Hertfordshire sites have also been studied, which altogether make a total of 862 from the county. Barbarous radiate hoards are known from all of these counties. Three of these will be considered here; one from Buckinghamshire and two from Hertfordshire. Each has been personally inspected.

The area as a whole has produced coins from a high number of find spots. The larger assemblages come from sites of varying functions, including temples (Woodeaton and Lowbury Hill), towns (Verulamium and Dorchester) and villas (such as Gorhambury, Boxmoor and Hambleden). More than half of the coins studied in this chapter come from the single site of Verulamium.

Summary of the coins recorded

Oxfordshire

- | | |
|-------------------|------------------|
| 1. Alchester (5), | 2. Asthall (34), |
| 3. Bicester (5), | 4. Bloxham (1), |

- | | |
|--------------------------------|------------------------|
| 5. Chipping Norton (5), | 6. Ditchley (3), |
| 7. Dorchester (14), | 8. Frilford (13), |
| 9. Headington (9), | 10. Hensington (7), |
| 11. Kidlington (1), | 12. King's Sutton (5), |
| 13. Long Wittenham (3), | 14. Lowbury Hill (45), |
| 15. Oxford (1), | 16. Shakenoak (87), |
| 17. Shotover Brickfield (7), | 18. Summertown (1), |
| 19. Wantage (1), | 20. Wilcote House (2), |
| 21. Woodeaton (177), | 22. Wootton (1), |
| Unprovenanced Oxon. site (41). | |

Buckinghamshire

- | | |
|-------------------------------|-------------------------------|
| 23. Aylesbury, Oxford Rd (1), | 24. Aylesbury, Stocklake (1), |
| 25. Hambleton villa (40), | 26. Haversham (1), |
| 27. High Wycombe (1), | 28. Kingswood (3), |
| 29. Latimer villa (1), | 30. Magiovinium (7), |
| 31. Mentmore (1), | 32. Stone (1), |
| 33. Whaddon Chase (1). | |

Hertfordshire

- | | |
|----------------------------|----------------------------|
| 34. Boxmoor villa (23), | 35. Near Cheshunt (1), |
| 36. Gorhambury villa (64), | 37. Northchurch villa (6), |
| 38. Verulamium (767), | 39. Watford (1). |

Hoards considered in this chapter

The size of the hoard is shown in brackets, followed by the number of barbarous radiates present.

Buckinghamshire

- | | | |
|------------------------------|------|----|
| 40. Moneybury Hill. Pitstone | (29) | 12 |
|------------------------------|------|----|

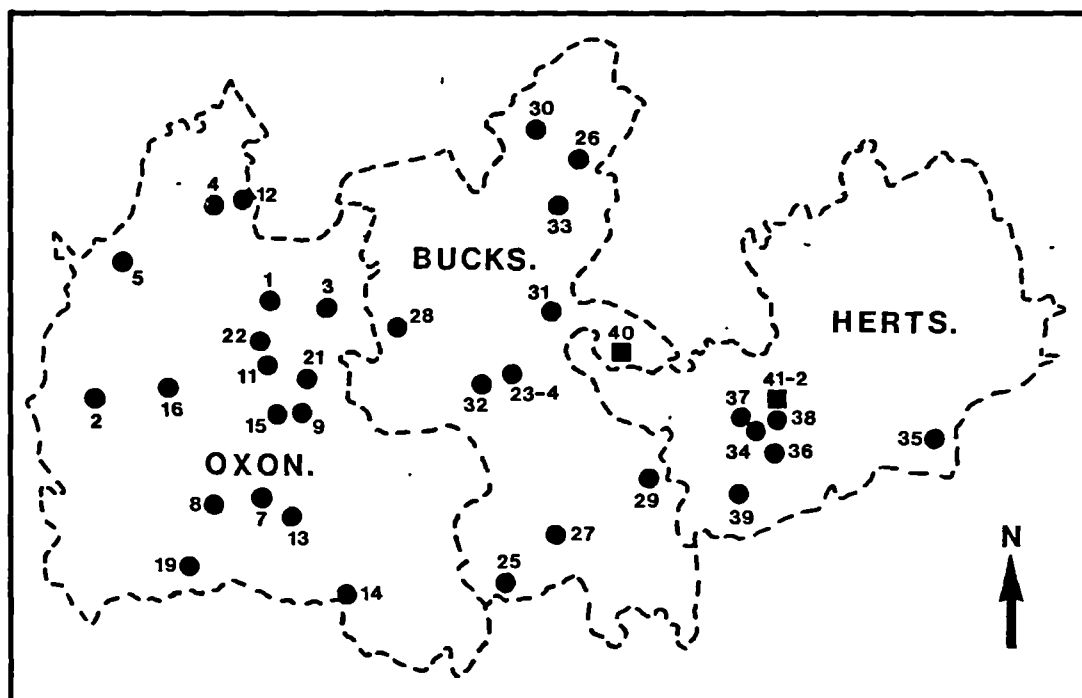


Fig.8:1 Map of sites and hoards in Oxfordshire,
Buckinghamshire and Hertfordshire. Scale 1:1,000,000

Hertfordshire

41. Verulamium (1960)	(90)	90
42. Verulamium Theatre	(796)	796

The locations of these sites and hoards are shown in figure 8:1. The site and hoard numbers indicated above correspond to their locations on the map.

Oxfordshire

Barbarous radiates have been recorded from twenty-three Oxfordshire findspots. More than thirty examples have been listed for each of five sites and these will be considered first.

Woodeaton (SP 5311)

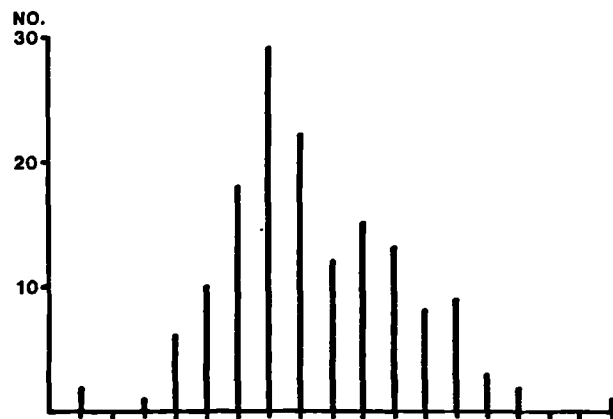
The barbarous radiates from the site of a pagan temple on Middle Hill, Woodeaton, were studied at the Heberden coin room of the Ashmolean Museum, Oxford. They do not result from a single systematic excavation but comprise the accumulation of several small collections from the site (Milne 1931). A total of 177 examples have been recorded and their types are summarised in figure 8:2.

The types present

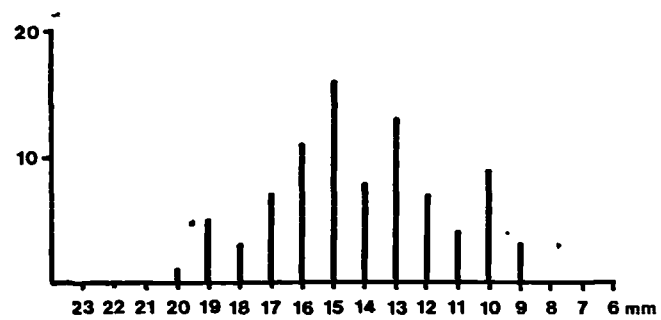
Eighteen coins are copies of Central Empire types. Seventeen are Gallienus, Claudius II and Divo Claudio imitations. One other is a less-common type of Aurelian. Over half of the barbarous radiates are Gallic Empire copies and they exhibit a good range of reverse types. One example of the rarely copied Princ Invent reverse of Tetricus II has been recorded.

CENTRAL EMPIRE	NO.	%
Gallienus	4	2.3
Claudius II	4	2.3
Divo Claudio - altar	4	2.3
- eagle	6	3.4
Aurelian	1	0.6
TOTAL CENT. EMP.	19	10.7
GALLIC EMPIRE		
Postumus	1	0.6
Victorinus		
- Invictus	4	2.3
- Pax Aug	3	1.7
- Other	<u>17</u>	
Total Victorinus	24	13.6
Tetricus I and II		
- Fides Militum	5	2.8
- Hilaritas Augg	7	4.0
- Laetitia	2	1.1
- Mars Victor	1	
- Pax Aug	9	5.1
- Pietas	10	5.6
- Princ Ivvent	1	
- Salus Augg	9	5.1
- Spes	9	5.1
- Victoria Aug	2	1.1
- Virtus Augg	3	1.7
Tetricus I, uncertain rev.	9	5.1
Tetricus II, uncertain rev.	<u>3</u>	1.7
Total Tetrici	70	39.5
Other types	<u>1</u>	
TOTAL GALLIC EMPIRE	96	54.2
Uncertain minimi	40	
Unclassifiable	<u>22</u>	
GRAND TOTAL	177	
Total minimi	54	30.5

Fig.8:2 Summary of types from Woodeaton



Woodeaton



Shakenoak

Fig.8:3 Coin diameters: Woodeaton and Shakenoak

Minims comprise 30.5% of the assemblage total. The coin sizes are shown in figure 8:3. The graph shows a peak at 17 mm, with a long tail, down to 9 mm and 6 mm, with a slight dip at 15 mm.

Some of the more distinctive types present have been illustrated in Plate 8:1. Two imitations of Tetricus II are included (numbers 12-13). Both have squat features and number 12 carries an attempted legend. Number 17 is a very poorly engraved copy. The reverse shows a large square shape, with circles next to three of the sides and stars at the corners. This must have been copied from the Consecratio, altar, type. Number 18, again, has very crude engravings, on both obverse and reverse. The obverse portrait resembles Postumus but the reverse carries the Roman numerals XXI, in the exergue. This coin in fact imitates the reformed antoniniani of Aurelian.

Other Wood Eaton coins illustrated are the more common, Gallic Empire, types. Number 19 is Victorinus' Invictus. The nose of the emperor is unusually straight and pointed; quite unlike the fuller hooked nose of the official portrait. Number 11 is a large coin of 20 mm diameter, which has cracks around the edge from its striking. The portrait of Tetricus I is featureless and the reverse figure of Pax is again simplified. Numbers 21, 22 and 23 are all versions of Tetricus II's Pietas, sacrificial implements. Numbers 21 and 23 both retain subsidiary implements alongside the central ewer, which have been omitted in the smaller engraving of number 22. Number 21 also carries some very prominent lettering on each face. These three examples serve to show the range of varieties encountered among Pietas copies and can be contrasted with the distinctive examples identified with the Invictus/ewer group of copies (chapter 4, group B).

Plate 8:1, 24 is a better copy; this time based on Salus Augg. The reverse carries high relief and the whole coin is well-preserved. Numbers 25 and 26 are also unworn. They have been shown in order to demonstrate the very poor attempts at portraiture which can be found among site finds. Their reverses, which are Salus Augg in each case, indicate that the portraits are intended to depict Tetricus I. Tetricus II is depicted in number 27. This copy of Spes Augg shows great character. The portrait has an enlarged jaw-line and prominent eye. Number 28, in contrast, is a more linear engraving, with the hair and beard of Tetricus I shown by wavy lines. The reverse type is Virtus Augg.

Die- and style-linking

A number of coins have been found to die- and style-link. Plate 8:1, 1 is a member of the Invictus/ewer group. The flan is very uneven but the overall style is unmistakable. The enlarged ewer dominates the reverse of the flan and lacks any other sacrificial implements or legend. The body of the ewer has a large curved handle to the right and is defined by an oval-shaped line, within which the body projects from the flan in high, rounded, relief. Although this coin does not die-link to any specific known example, its reverse is very similar to examples from Cirencester (Plate 6:1, 23), the Goring-on-Sea hoard from Sussex (Mattingly 1967b, Pl.1, 25 and 27), London (Plate 10:2, 20), Richborough (Davies 1982b, Pl.2, 12-13), Chichester in Sussex (Plate 9:1, 11) and Verulamium (Plate 8:3, 32 and 35). The existence of a substantial sub-group within the overall Invictus/ewer group has emerged.

A small die-linked group has been identified within the

Woodeaton assemblage, which is shown in Plate 8:1, 3-5. Number 5 has an obverse portrait with a dotted forehead and a reverse with a strange figure, which has an elongated curved arm, to the right. The reverse border is very heavy. The obverse die-links to number 3, which also carries a heavily-bordered reverse, although the finer detail does not show. The reverse of number 5 die-links with number 4. Coin number six has a reverse with a heavy border and similar figure. It does not die-link but must be considered to be related to the group; produced at the same irregular mint. Two other Woodeaton coins of similar size and treatment are shown in Plate 8:1, 7-8. Neither die-links but they too may be related to the die-group; possibly originating from the same source. Number 9 is a larger coin, from the site of Richborough, Kent. It has been shown here because the figure depicted on the reverse shows some similarity to the Woodeaton die-links. It may be a product of the same engraver but is not close enough in style to be certain.

Plate 8:1, 2 is a Tetricus I copy with a obverse portrait very similar in style to the coins from Cold Kitchen Hill, Wiltshire, illustrated in Plate 6:7, 4-6. It is likely that the Woodeaton example is a product of the same irregular mint.

Several other Woodeaton coins appear to share stylistic similarity in their portraiture. Plate 8:1, 10 and 11 are large Tetrican copies with badly-defined engravings. Their portraits share hooked noses, horizontal hair lines on the neck and large crowns. Numbers 14 and 15 exhibit differing amounts of portrait detail but the overall facial dimensions used are very similar. The very crude reverse shown in number 15 compares in this respect with number 16. These are very distinctive types and have not been recorded at other sites.

These examples which share some features in common, however limited, may represent the output of a local workshop over a long period. With so few die-links in evidence it may be possible to define the products of such 'mints' by these stylistic associations.

Conclusion

The combined assemblage of barbarous radiates from Woodeaton is an accumulation of a number of small excavated collections. The group does not show any obvious biases in its composition as a result of its piecemeal composition. A good range of types have been identified. Neither is the assemblage biased towards larger or better types. Over a third of the coins are minimis and very few approach the standard official engravings.

The presence of a single example of H.B. Mattingly's Invictus/ewer group has been noted. The closeness of this engraving to other specific members of that group has been pointed to the occurrence of a sub-group. One small group of internal die-links has been recognised. These, together with some crude copies which share unusual engraving features could represent the output of a common, local, manufacturer who supplied part of the coin requirement of Woodeaton.

Shakenoak (SP 3714)

The villa at Shakenoak was situated to the east of a spread of villas which extended beyond Cirencester, between the Roman settlements of Asthall and Alchester. A total of eighty-seven barbarous radiates have been recorded from the excavations at the site (Brodribb, Hands and Walker 1968). They form a substantial assemblage for this category of site.

The types present

The Shakenoak coin types are listed in summary form in figure 8:4. The percentages of Divo Claudio and Central Empire coin types generally are very closely comparable to those from Woodeaton. The percentage representing the Gallic Empire is less than 40% and is low compared to most sites studied. As at Woodeaton, the copies tend to be crudely engraved and not easily mistaken for regular coins.

The sizes are shown in figure 8:3. The graph shows a rough bell-shape, with a peak at 15 mm. Over 40% of the Shakenoak imitations are classifiable as minims, which is high.

Eight of the coins are illustrated in Plate 8:2. Numbers 1-3 are all Consecratio, altar, types, of successively smaller module. Number 1 shows a recognisable portrait of Claudius II but lacks the finish of a regular coin. The reverse is much cruder, with jumbled lettering and large, linear, altar. Coin 2 carries a neater reverse engraving but the altar has become stylised at the corners and at the top - where additions have been made (compare the official variations in figure 3:9). Number 3 is a minim. The altar has been reduced to concentric squares in the limited space available.

Two larger coins with highly unusual styles are illustrated in Plate 8:2, 4 and 5. Number 4 has a reverse which was modelled on the Invictus type of Victorinus. The obverse is not at all life-like and is more of a caricature than a portrait. Number 5 shows Tetricus II, coupled with his Pietas reverse type. The portrait is recognisable but lacks detail. On the reverse, the sacrificial implements have been greatly simplified. The feature of the coin is the prominent legend on each face, which has become design-like, inside a heavy border.

Plate 8:2, 28 has a very scratchy engraving, which is

CENTRAL EMPIRE	NO.	%
Gallienus	2	2.3
Claudius II	2	2.3
Divo Claudio - altar	5	5.7
- eagle		
TOTAL CENT. EMP.	9	10.3
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	3	3.4
- Pax Aug		
- Other	<u>1</u>	1.1
Total Victorinus	4	4.6
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg	1	1.1
- Laetitia	4	4.6
- Mars Victor		
- Pax Aug	2	2.3
- Pietas	2	2.3
- Salus Augg	1	1.1
- Spes	2	2.3
- Victoria/Comes Aug	1	1.1
- Virtus Augg		
Tet. I, uncertain rev.	7	8.0
Tet. II, uncertain rev.	<u>2</u>	2.3
Total Tetrici	22	25.3
Other types	<u>7</u>	
TOTAL GALLIC EMP.	33	37.9
Uncertain minimi	29	
Unclassifiable	16	
GRAND TOTAL	87	
Total minimi	36	41.4

Fig.8:4 Summary of types from Shakenoak

possibly based on Tetricus I. The reverse is unrecognisable and has been classified as a 'pin figure'. Number 7 is a minim which carries an invented, non-figurative, reverse type. A lyre-shape is shown, inside of which is a star. The final Shakenoak coin chosen for illustration in Plate 8:2 is number 8. The portrait is highly distinctive, with a prominent, bulbous, nose. This coin has been associated with a style group of five coins from Neatham, in Hampshire (Pl. 7:5; 23, 27-29, 35).

No die-links or other good style-links have been associated with the Shakenoak coins. This excavated site group contains a typical range of types, with a particularly high proportion of minims. Many of the coins exhibit distinctive and memorable engravings.

Lowbury Hill (SU 5482)

Atkinson's excavations at the Romano-British site on Lowbury Hill between 1913 and 1914 produced a very high total of 873 coins (Atkinson 1916). The coin assemblage, as a whole, has since been re-examined by this writer (Davies 1985). The site is thought to have been a temple, which would account for this otherwise unusually high number of coins from a rural site (op.cit.).

Forty-five barbarous radiates were identified within the Lowbury Hill assemblage. This represents just 5% of the group, which is a very small proportion. Their types are summarised in figure 8:5. The coin sizes are shown in figure 8:6. That graph shows a spread of sizes from 20 mm to 9 mm but the comparatively small number of coins plotted means that there is no clear shape. The diameters from 14 mm to 16 mm share the highest numbers of coins.

CENTRAL EMPIRE	NO.	%
Gallienus	1	2.2
Claudius II	1	2.2
Divo Claudio - altar	3	6.7
- eagle	3	6.7
 TOTAL CENT. EMP.	 8	 17.8
 GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	2	4.4
- Pax Aug	1	2.2
- Other	<u>2</u>	4.4
Total Victorinus	5	11.1
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg	1	2.2
- Laetitia	1	2.2
- Mars Victor	1	2.2
- Pax Aug	3	6.7
- Pietas	1	2.2
- Salus Augg	2	4.4
- Spes	4	8.9
- Victoria/Comes Aug		
- Virtus Augg	2	4.4
Tet. I, uncertain rev.	4	8.9
Tet. II, uncertain rev.	<u>1</u>	
Total Tetrici	19	42.2
Other types	<u>2</u>	
TOTAL GALLIC EMP.	26	57.8
Uncertain minimi	5	
 Unclassifiable	 6	
GRAND TOTAL	<u>45</u>	
Total minimi	9	20.0

Fig.8:5 Summary of types from Lowbury Hill



Lowbury Hill



Asthall



Unprovenanced Oxon. site

Fig.8:6 Coin diameters: Lowbury Hill, Asthall and the unprovenanced site

The published report by this writer concerned the whole assemblage and not just the irregular coins. However, the more interesting types were noted and nine of them were illustrated (Davies 1985, Plate 1, 10-18). For this reason, an offprint of the paper has been included at the end of this thesis, for ease of reference. Illustrations of those coins have not been duplicated here.

The types present

The more interesting barbarous radiates from Lowbury Hill will now be discussed here, with reference to the published Plate (Davies 1985, Plate 1). The Gallienus copy (Plate 1, 10) depicts a panther on the reverse, from the emperor's Libero P Cons Aug series. This coin retains a silver wash. Numbers 11 and 12 are copies of Victorinus; both with recognisable portraits. The former is Salus Aug and the latter Pax Aug. Plate 1, 13 is a derivative of the Invictus/ewer group, with the former reverse type. The portrait carries the distinctive pointed features which characterise this group. The remaining coins illustrated are all imitations of Tetricus II. Numbers 14 and 15 are both Spes Augg; number 16 is Virtus Augg; number 17 is Pax Aug and number 18 is Salus Augg. No die-links have been identified among these coins.

Asthall (SP 2811)

Thirty-four barbarous radiates from the Roman settlement at Asthall have been recorded. The site was positioned on Akeman Street, nineteen miles to the west of Alchester. The types present are summarised in figure 8:7 and the sizes in figure 8:6.

CENTRAL EMPIRE	NO.	%
Gallienus		
Claudius II	1	2.9
Divo Claudio - altar	2	5.9
- eagle		
TOTAL CENT. EMP.	3	8.8
GALLIC EMPIRE		
Postumus	1	2.9
Victorinus		
- Invictus	2	5.9
- Pax Aug		
- Other		
Total Victorinus	2	5.9
Tetricus I and II		
- Fides Militum	1	2.9
- Hilaritas Augg		
- Laetitia		
- Mars Victor		
- Pax Aug	2	5.9
- Pietas	2	5.9
- Salus Augg	1	2.9
- Spes		
- Victoria/Comes Aug	2	5.9
- Virtus Augg	2	5.9
Tet. I, uncertain rev.		
Tet. II, uncertain rev.		
Total Tetrici	10	29.4
Other types	<u>1</u>	
TOTAL GALLIC EMP.	14	41.2
Uncertain minimi	8	
Unclassifiable	<u>9</u>	
GRAND TOTAL	34	
Total minimi	19	55.9

Fig.8:7 Summary of types from Asthall

The most striking feature of the assemblage is that over half of the coins are minims. The peak of coin sizes, in figure 8:6, is at 12 mm - 13 mm, which is unusual for a site. Four of the coins are illustrated in Plate 8:2, two of which are minims. Number 9 has been struck on a square-shaped flan. The circular impression of the obverse die has been carefully centred on the flan, which accentuates the irregular flan shape. Number 10 is a copy of Claudius II, with distinctive beard. The portrait retains a caricature-type likeness of that emperor. Similarly, number 11 is recognisable as Postumus, although it is very poorly copied. Number 12 is a copy of the Consecratio, altar, type, with the altar represented by five concentric squares. The obverse, whose portrait is unrecognisable, has been double-struck. No die-links have been recognised.

An unprovenanced site assemblage from Oxfordshire

Forty-one barbarous radiates have been recorded from a Roman site assemblage of uncertain provenance. The coins were recorded at Woodstock Museum and the site is known to have been within Oxfordshire. The location of the site was thought to have been at Somerton but this remains unconfirmed. The types present are summarised in figure 8:8.

As was the case for Asthall, over half of the coins are of minim size. Again, the peak is found at 12 mm (see figure 8:6).

One copy of Aurelian is present (catalogue number 4) which depicts his Oriens Aug reverse. Other coins present are illustrated in Plate 8:2. Number 13 is a Tetrican copy, with Victoria walking right (it should be left). Numbers 14 and 15 are both Pietas, sacrificial implements, copies of minim size.

CENTRAL EMPIRE	NO.	%
Gallienus	1	2.4
Claudius II	1	2.4
Divo Claudio - altar	1	2.4
- eagle		
Aurelian	1	2.4
	<u>4</u>	
TOTAL CENT. EMP.	4	9.8
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus		
- Pax Aug		
- Other	3	7.3
Total Victorinus	3	7.3
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg		
- Laetitia		
- Mars Victor		
- Pax Aug	2	4.9
- Pietas	3	7.3
- Salus Augg	1	2.4
- Spes	3	7.3
- Victoria/Comes Aug		
- Virtus Augg	1	2.4
Tet. I, uncertain rev.	4	9.8
Tet. II, uncertain rev.	<u>1</u>	2.4
Total Tetrici	15	36.6
Other types	<u>1</u>	
TOTAL GALLIC EMPIRE	18	43.9
Uncertain minimi	13	
Unclassifiable	6	
GRAND TOTAL	<u>41</u>	
Total minimi	21	51.2

Fig.8:8 Summary of types from the unprovenanced Oxon. site

The former has a well-engraved, ribbed, ewer but the latter is barely recognisable. Number 16 is a well-executed Spes Augg of Tetricus I. Number 17 is a very crude copy, struck on a very irregular-shaped flan. The obverse of Tetricus I has been double-struck, with a second radiate crown visible beneath the emperor's chin. Number 18 is a rare copy of Tetricus II with a left-facing bust (as used in Elmer 793, at Trier).

Other Oxfordshire sites

Coins have been recorded from eighteen additional Oxfordshire provenances but these have all produced less than fifteen barbarous radiates apiece. Unfortunately, die-links could not be found among these coins but twelve have been illustrated in Plate 8:2.

Four coins recorded in the Ashmolean Museum, with the provenance Shotover Brickfield, have been illustrated. Number 19 depicts Postumus and has a stylised, curled, beard treatment. Number 20 is Laetitia and 21 is Pietas. Number 22 shows the Consecratio altar reverse but the portrait bears similarity to Victorinus. Number 23, from Long Wittenham, is a brassy coloured copy of Gallienus, with the reverse of Jupiter, standing right. Number 24 is a well-preserved Laetitia copy from Frilford and 25 is a clearly-struck, but low-relief, minim of Tetricus II, from the same provenance.

Plate 8:2, 26 is a very basic copy of Spes from Wilcote House. Number 27 is a triangular minim from Ditchley, which has a tiny obverse portrait and part of the Invictus figure visible on the reverse. Two unprovenanced Oxfordshire coins have been included because of their unusual types. Number 28 is a double reverse. On one side is Spes and on the other is Pietas. Both engravings are complete in detail but lacking in

engraving skill. Number 29 is a very neatly engraved minim, with particularly highly detailed portraiture. Number 30 is a further example of a Tetrican II left-facing bust, this time from the Bicester area. Finds from other sites have been listed in the catalogue.

Buckinghamshire

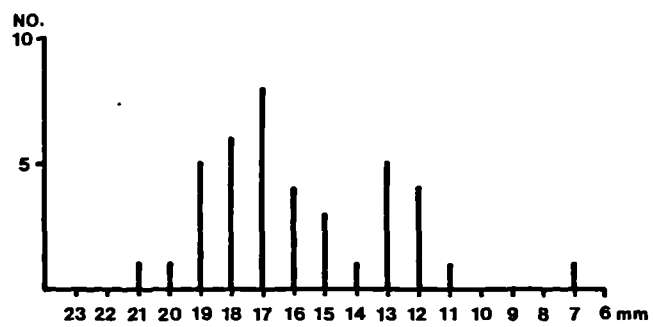
The county of Buckinghamshire coincides approximately with the western half of the tribal territory of the Catuvellanuni. The tribal capital lay to the east, at Verulamium (Hertfordshire) and the area defined as modern day Buckinghamshire was rural in character. A large concentration of villas extended from Verulamium westwards and into the area in question here. Coin collections studied from this county were small and the only assemblage of any appreciable size comes from Hambleden villa. The other findspots are all represented by single figures. This study has been completed before other substantial coin assemblages from the area around Milton Keynes, such as that from Barcroft villa, were available for comparison.

Hambleden villa (SU 7886)

Hambleden was a modest-sized villa, of tripartite or H-plan. Forty barbarous radiates have been listed from the site, as summarised in figure 8:9. The types present compare closely with those from other sites reviewed in this chapter. Although a modest-sized assemblage, the usual range of types are present. The diameters shown in figure 8:10 exhibit a peak at 17 mm, tailing-off down to 7 mm, but with a second rise in the graph at 13 mm - 12 mm.

CENTRAL EMPIRE	NO.	%
Gallienus	1	2.5
Claudius II	3	7.5
Divo Claudio - altar	3	7.5
- eagle	1	2.5
	—	
TOTAL CENT. EMP.	8	20.0
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	4	10.0
- Pax Aug		
- Other	<u>1</u>	
Total Victorinus	5	12.5
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg		
- Laetitia		
- Mars Victor		
- Pax Aug	2	5.0
- Pietas	4	10.0
- Salus Augg	1	2.5
- Spes	2	5.0
- Victoria/Comes Aug		
- Virtus Augg		
Tet. I, uncertain rev.	4	10.0
Tet. II, uncertain rev.	—	
Total Tetrici	13	32.5
Other types	<u>6</u>	
TOTAL GALLIC EMPIRE	24	60.0
Uncertain minimi	8	
Unclassifiable	—	
GRAND TOTAL	40	
Total minimi	11	27.5

Fig.8:9 Summary of types from Hambleden villa



Hambleden Villa

Fig.8:10 Coin diameters: Hambleden villa

The Hambleton assemblage does not show any cohesion of style or manufacture. A complete variety of styles are present. Some examples exhibit square-shaped flans, such as the large Consecratio, altar, copy (catalogue number 5) and that shown in Plate 8:5, 3. Surface silvering is noted on one Gallienus copy (catalogue number 1) and one Victorinus copy (catalogue number 9).

The range of quality present is apparent in relation to the Invictus types illustrated in Plate 8:5, 1-3. All three are very crude but very different and clearly the work of different engravers. Plate 8:5, 4 is a Salus Augg copy of Tetricus I. The reverse is almost passable as a regular coin but the obverse is highly irregular, with an elongated portrait. Number 5 again has a lamentable portrait of Tetricus I, coupled with the reverse Spes Publica. One other coin illustrated in Plate 8:5, number 6, has been classified as a 'pin figure'. This very crude engraving lacks any helpful detail to enable identification.

Other Buckinghamshire sites

The Buckinghamshire coins generally exhibit a great deal of wear. Most were recorded at Aylesbury Museum and their details are presented in the catalogue, at the end of this thesis. Seven examples come from the Roman town of Magicvinium. Two are illustrated in Plate 8:5, 7-8. The first is a small Tetrican Laetitia copy and the second is a Tetrican Pax Augg, with high relief and prominent border. Plate 8:5, 9 is a Pietas copy from High Wycombe. The ewer is of a totally different style to that used in the Invictus/ewer group. The obverse appears to depict Victorinus, who should not be coupled with this reverse type. Plate 8:5, 10 is a Laetitia copy from

Oxford Road, Aylesbury. The engraving is good and might pass as regular to an untrained eye.

A hoard from Moneybury Hill, Pitstone

During the study of barbarous radiates at Aylesbury Museum, this writer was shown a small third century coin hoard from Moneybury Hill, Pitstone. The thirty coins had received initial identification by Dr D.Nash at the Ashmolean Museum, Oxford. The presence of die-links within the irregular component was considered to be important and a short paper, accompanied by photographs of the barbarous radiates was prepared and published (Davies 1982c). Offprints of the paper were not produced and so a summary of the hoard is included here.

The deposit was discovered by metal detector users who were disturbed while illegally digging on a Scheduled Ancient Monument. Seventeen regular antoniniani dating from Postumus to the Tetrici were accompanied by twelve barbarous radiates, which copy coins of the same period. A dupondius of Nerva was recovered from the detector users with the other coins and may be intrusive to the hoard, especially given the lack of a container. A full catalogue of the coins is provided in the publication (Davies, op. cit.).

The irregular coins comprise two copies of Claudius II, four of Victorinus, three of Tetricus I and three of Tetricus II. Five of these are illustrated here, in Plate 8:5, 11-15. Two of the Victorinus copies were struck from a common obverse die (Plate 8:5, 11-12). Their obverse and reverse legends are totally illegible, comprising the letters V and A. A pronounced milled border is present on each face of the coins.

The portrait of Victorinus has a short hooked nose and pointed beard. The reverse of number 12 copies Pax Aug. from Elmer 682. Number 11 has the reverse Providentia Aug. Numbers 12 and 15 both exhibit field marks on their reverses. The former has a small branch low in the field, right, allowing its allocation to a specific Elmer issue. Number 15 has a star in the field, left, coupled with the Comes Aug reverse from Cclcgre. Such precise reproduction of field marks is unusual in this coinage, with the trend more commonly being towards simplification and omission of detail.

Plate 8:5, 13 and 14 are coins which may also be products of a common mint. Both are copies of Claudius II. They share similar obverse legends, lettering and facial shape, together with prominent reverse borders.

The latest regular issues present in the Moneybury Hill hoard belong to AD 274. The module of the copies approaches that of official antoniniani, with no small types present. A burial date for this deposit is likely to have been some time between AD 270 and 275, when the progressive reduction in flan size began to occur. The lower proportion of Tetrican copies, which usually dominate collections, to those of Claudius II and Victorinus, assists towards this conclusion.

Hertfordshire

The modern county of Hertfordshire again falls into what was the canton of the Catuvellauni. Nearly 90% of the coins studied from the county come from excavations at Verulamium. Those coins are an appreciable sample of the currency which circulated at the civitas capital and comprise a very useful collection for study purposes. In addition to that large collection from an urban site, coins from three villas have

also been recorded. It is clear that the bulk of the population of this civitas lived in the countryside (Branigan 1985). The largest concentration of villas was focussed in the area to the west of Verulamium. The villas whose coins have been studied come from that area of settlement. The first site to be considered individually in this section will be the civitas capital.

Verulamium (TL 1307)

After the mid-third century the Roman town of Verulamium (St Albans) covered some 80 ha and was enclosed within masonry defences (Branigan 1985, 68). Major excavations were undertaken at the site between 1930-4, by Sir Mortimer Wheeler, and between 1955-61, by Professor Sheppard Frere. A total of 767 barbarous radiates have been recorded from Verulamium. Six hundred and thirty-seven were seen at Verulamium Museum, which were principally from Wheeler's excavations, although some other finds from the site have been amalgamated within the Museum trays. The remaining 130 come from Frere's more recent excavations.

The types present

The types present have been summarised in figure 8:11. The totals from both collections are shown in separate columns and they are combined in the final column, to give a site total. The most striking feature is the small number of Central Empire types present within the Museum collection, which represent just 2.7% of the collection. This contrasts with the figure of 10.8% among Frere's coins, which is more closely comparable to other English sites. In other respects the Verulamium types

CENTRAL EMPIRE	<u>MUSEUM</u>		<u>FRERE</u>		<u>TOTAL</u>	
	NO.	%	NO.	%	NO.	%
Gallienus	3		3		6	0.8
Claudius II	2		1		3	0.4
Divo Claudio - altar	8		6		14	1.8
- eagle			4		4	0.5
Probus	4				4	0.5
TOTAL CENT. EMP.	17	2.7	14	10.8	31	4.0
GALLIC EMPIRE						
Postumus	4		1		5	0.7
Victorinus						
- Invictus	31	4.9	2	1.5	33	4.3
- Pax Aug	6		4		10	1.3
- Other	<u>22</u>		<u>2</u>		<u>24</u>	3.1
Total Victorinus	59	9.3	8	6.2	67	8.7
Tetricus I and II						
- Fides Militum	7	1.1			7	0.9
- Hilaritas Augg	9	1.4	2	1.5	11	1.4
- Laetitia	13	2.0	2	1.5	15	2.0
- Mars Victor	6	0.9			6	0.8
- Pax Aug	59	9.3	15	11.5	74	9.6
- Pietas	19	3.0	9	6.9	28	3.7
- Salus Augg	25	3.9	7	5.4	32	4.2
- Spes	29	4.6	10	7.7	39	5.1
- Victoria/Comes Aug	5	0.8	1	0.8	6	0.8
- Virtus Augg	14	2.2	4	3.1	18	2.3
Tet. I, uncertain rev.	26	4.1	9	6.9	35	4.6
Tet. II, uncertain rev.	<u>19</u>	3.0	<u>5</u>	3.8	<u>24</u>	3.1
Total Tetrici	231	36.3	64	49.2	295	38.5
Other types	<u>42</u>		<u>—</u>		<u>42</u>	
TOTAL GALLIC EMP.	336	52.7	73	56.2	409	53.3
Uncertain minimi	144		22		166	
Unclassifiable	<u>139</u>		<u>21</u>		<u>160</u>	
GRAND TOTAL	637		130		767	
Total minimi	241	37.8	35	26.9	276	36.0

Fig.8:11 Summary of types from Verulamium

show a broadly similar distribution to that recorded from other sites studied. Some of the more distinctive coins present are illustrated in Plates 8:3 and 8:4, and will be described below.

A total of five imitations of Postumus are present. These are all poor copies and one is shown in Plate 8:3, 10. It has a squat, crescent-shaped face with pointed beard and nose. Plate 8:3, 15 and 16 are both copies of Tetricus II, both with the Spes reverse. These coins have been well-engraved, on large flans, but would not be mistaken for regular coins. They have very high relief coupled with uneven lettering. The portraits have particularly long necks.

Five coins from Verulamium carry particularly problematic reverses which cannot be directly related to known prototypes. Three of these appear to depict a man standing in a 'trough'. One is illustrated in Plate 8:4, 9. It is considered that this type was arrived at by successive copies of the Pietas, sacrificial implements, reverse of Tetricus II. This derivation is described more fully in chapter 12 (see also figure 12:5). It has also been described and illustrated in relation to the site of Richborough (Davies 1982b, 20). The second type in question depicts a man holding a circular shield, right. Two examples were found; one of which is illustrated in Plate 8:4, 8.

Many very crudely engraved coins were encountered at Verulamium. Those coins illustrated from the site are not exceptionally poor but represent the less-worn examples. Plate 8:4, 17 shows Invictus, coupled with an unrecognisable portrait of Victorinus. Numbers 18 and 19 are extremely basic, scratchy, copies. They have been identified as Tetrican Mars Victor copies. Numbers 20-22 are all Tetrican Pax Aug types of very different quality. Number 20 has a double-struck obverse.

Four Spes copies are shown in Plate 8:4, 23-6. The reverses all have a degree of simplification but the obverses are even more basic. Number 25 in particular is barely recognisable as a human face. The engraving of number 27 is more elaborate but not easily identifiable as Tetricus I, who is depicted, according to the legend. Numbers 28-30 are all copies of Tetricus II. They share a similarity of facial shape but the engraving style is very different in each case.

Plate 8:4, number 31, is a unique copy. It has a reverse engraving of a mounted figure. Figures on horseback are depicted on the antoniniani of Claudius II (RIC 5: 538) and Probus (RIC 5: 154-67) but the copy in question is a type of Tetricus I, as shown by the obverse legend (catalogue number 74). This imitation must have been based on an aureus of Tetricus I; Elmer 797, Adventus Aug.

Examples of internal and external linking

Some of the coins described here may not appear to be closely similar in detail but they have been grouped together, in the absence of die-links, in an attempt to isolate those from common sources of production. Although some examples do not share identical engravings, they have been considered broadly similar in treatment, as well as dissimilar to other styles encountered.

Plate 8:3, 1 and 2 are both copies of Tetricus I, with reverses of Pax Aug and Mars Victor respectively. Their portraits are very scratchy and they have a similar overall shape. These are tentatively grouped together. Plate 8:3, 3-9 comprise a larger group of Tetrican copies, of varying module. Once again, no two engravings are extremely close but all share

an unusual and broadly similar facial shape. Plate 8:3, 17 and 18 are two poorly engraved copies of Victorinus. They share the long, bulbous nose and flat countenance. They may have been engraved by the same hand. The coins shown as numbers 12 and 13 have barely recognisable portraits. The crown has become stylised and dominates the flan in a spiky design. These two have been categorised together for convenience, although a common origin would be pure guesswork. Another example of comparable quality has been found at Cirencester (Plate 6:2, 3).

Six other Verulamium coins are illustrated in Plate 8:4, 11-16, which are grouped together because of their portraiture. These coins share a squat portrait, with short nose and forehead, and a flat head. The radiate crown is placed well back on the head. A similar obverse has been seen on a coin from Chichester in Sussex, which is illustrated in Plate 9:1, 7, and is especially close in appearance to 8:3, 11. One Verulamium coin has a similar obverse to a coin from Winchester. The example shown in Plate 8:4, 1 is close in appearance to that in Plate 7:4, 15, from the Hampshire site.

Invictus/ewer group types at Verulamium

The most interesting of the coins recorded from Verulamium are the large number of examples which can be considered to belong to the Invictus/ewer die- and style-group originally recognised by H.B. Mattingly (Chapter 4, group B). Examination of the examples from this site has clearly shown that a number of sub-groups can be separated within the overall type. These coins have been illustrated and their comparability to examples from other sites will be noted.

Plate 8:3, 19 and 20 have simple pointed faces. The former

has the Invictus reverse and the latter is indeterminate. Number 14 is more loosely associated with these types.¹ A similar example has come from London (Plate 8:3, 21 - note that this is the obverse of a coin illustrated in the Paternoster Row hoard report (Mattingly 1967, Pl.7, 44)).

Two Invictus/ewer group examples, each without close parallel, are shown in Plate 8:3, 23 and 8:4, 10. They are both based on the Invictus form.

The coin shown in Plate 8:3, 26 is an example with an angular portrait, which is typical of the group, and carrying a heavily dotted border. The obverse is very similar to two others recorded at Cirencester (Plate 6:1, 25-6 and also shown here as numbers 27-8). Each of these three has an unidentifiable figure on the reverse.

The example shown in Plate 8:3, 29 is an implements variant. The ewer has a central vertical rib. A similar example was identified at the nearby site of Gorhambury (Plate 8:5, 13).

Plate 8:3, 30 is the 'classic' form of this group, employing the ewer² reverse. It is neatly engraved and displays the pointed portraiture with V-shaped neck. The reverse jug has a flat shoulder and an enlarged handle, surrounded by a dashed legend. Examples of this form have been found on other locations, including Frilford in Oxfordshire (Plate 8:3, 31), in the Newgate Street hoard from London (Plate 8:3, 24: note that this coin has an Invictus reverse) and from Colchester (Plate 10:3, 7).

Plate 8:3, 32 and 35 have blurred obverses and lack the V-shaped neck. The reverses carry a larger ewer than the last group but again with a large handle and surrounded by a dashed legend. The style of the ewer also contrasts with the previous

form (Plate 8:3, 30) in that it has a rounded and not a flat neck. The body of the jug is oval in shape. Examples of this variation are widespread. They have been recorded from:-

Silchester, Hampshire (Plate 7:1, 26),
Chichester, Sussex (Plate 9:1, 11),
Richborough, Kent (Davies 1982b, Plate 2, 12-13),
Woodeaton, Oxfordshire (Plate 8:1, 1),
London (Plate 10:2, 20),
the Goring-on-Sea hoard, Sussex (Mattingly 1967b, 25 and
27),
Cirencester, Gloucestershire (Plate 6:1, 23).

Plate 8:3, 22 has little detail on the obverse, apart from the distinctive dotted border. The reverse carries the Invictus form. This example is similar to another from Chanctonbury in Sussex, shown here in Plate 8:3, 34 (also shown in Plate 9:1, 2), which has a little more detail on each face. These coins are broadly similar in style to the Verulamium examples in Plate 8:3, 22 and 25.

Two further Invictus examples are illustrated in Plate 8:4, 6 and 7. Their obverses show more attention to detail. The beards are dotted, although the chin is pointed and a V-shaped neck is just visible on the former example. Both flans are vaguely square-shaped.

Finally, three related examples are shown in Plate 8:4, 3-5. The reverses do not carry recognisable types. The obverses all have prominent borders and the flans are roughly square-shaped. The similarity of these types to some of the Invictus/ewer coins is such that they should be noted for further comparison with subsequent finds.

It is clear from a study of the coins described above that the Invictus/ewer group contains a fairly wide range of variation within its basic type. None of these coins actually die-link but there is a general adhesion to the main characteristics. There are a number of examples which display the main features very clearly, such as Plate 8:3, 30, and it may be that such types formed the original group of imitations from which others were subsequently copied. The question of sub-groups will be returned to in chapter 12. The number of Invictus/ewer group types at Verulamium would point to this site as having been a manufacturing centre for this distinctive variety of imitation.

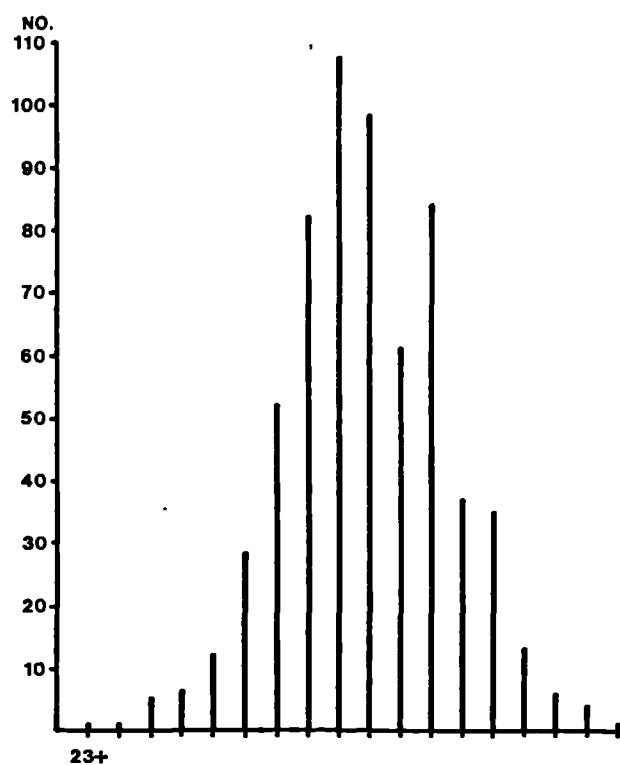
The sizes of the coins

The diameters of the Verulamium barbarous radiates are shown in figure 8:12. The Museum coins range in size from over 23 mm to 6 mm and those from Frere's excavations from 21 mm to 8 mm. Both graphs have a single peak at 15 mm. Minims account for 38% of the former collection and 27% of the latter.

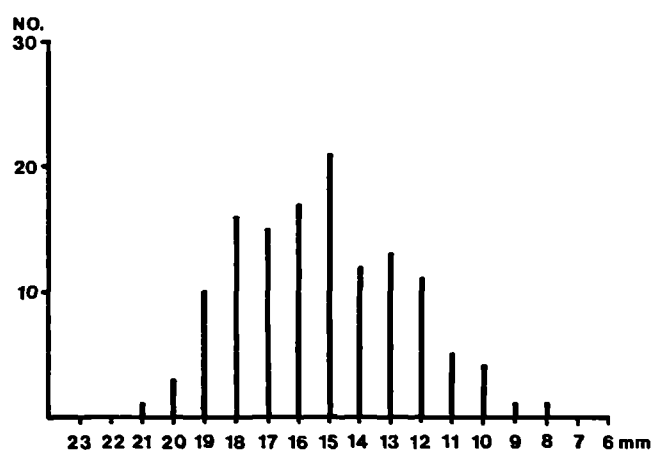
Conclusions

When the barbarous radiate types present at Verulamium are listed in figure 8:10 and compared with other sites, this appears to be a reasonably typical assemblage. That is not the case. When the coins are looked at individually they are highly distinctive. In particular, the Verulamium Museum coins repeatedly exhibit traits which make this site collection special.

The Verulamium coins contain a high number of angular and clipped flans. Square-shaped flans are numerous and a



Verulamium Museum



Verulamium - Frere

Fig.8:12 Coin diameters: Verulamium

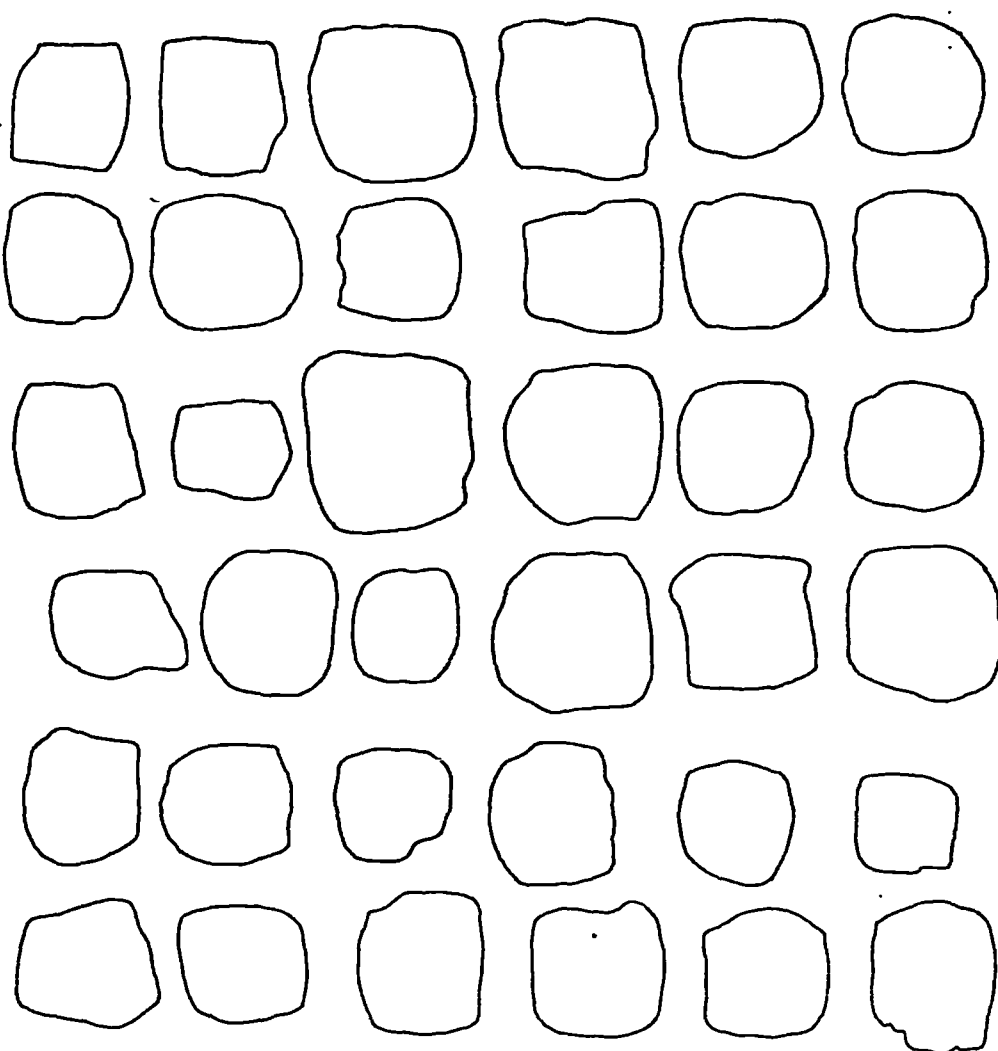


Fig.8:13 Flan shapes from Verulamium. Scale 1:1

selection of these are represented in figure 8:13, where their outlines have been traced. It is noted that all of these coins have been subjected to vigorous circulation and wear. Approximately 130-140 (21%) of the 637 Museum barbarous radiates show signs of clipping.

Very generally speaking, the Verulamium coin legends exhibit a high proportion of errors and illiteracy. Unfortunately, it is difficult to quantify this observation and impossible to compare this aspect against other assemblages numerically, at present.

There is a higher proportion of very crude engravings at Verulamium than at other sites. Mention was made in chapter 7 of a group of very crude imitations from Neatham, in Hampshire (Plate 7:5, 4-10). Such coins represent a more significant component at Verulamium, with reverses being particularly poor (for the extreme of this, see Plate 8:3, 12-13).

The types present at Verulamium have been listed neatly in figure 8:11 by their types, for ease of inter-site comparison. Very many of these coins were hard to pidgeonhole in this way. Legends were often indecipherable and engravings vague. Identification was often reduced to assigning caricature-type portraits to emperors. Reverses such as those shown in Plate 8:4, 18-19 were not easy to identify.

This assemblage as a whole has certain recurring traits among the coins. These include angular flans, pronounced (often beaded) borders and illiterate legends. The recurrence of coins belonging to the Invictus/ewer group has also been stressed.

The fifteen Invictus/ewer group coins identified, which all come from Wheeler's excavations, represent over 2% of the Museum collection. Associated types are found all over England

but an eastern bias among the sub-groups suggested appears to be the case, on current evidence. The examples present range from the 'classic' form, which has all the key features of the group, through to derivative forms.

In conclusion, the observations noted about the Verulamium barbarous radiates would suggest a degree of local production. The cruder types, frequently of larger module, do not link beyond this site and appear to have had a relatively localised circulation. The Invictus/ewer types appear to have travelled more extensively. Could this site have been the centre of production for the Invictus/ewer group in general? It is central to the known extremes of circulation of that group - which are currently in the Midlands, in the north, and Sussex, in the south. A range of forms are represented. Additional examples are known from Verulamium, which come from a hoard discovered in the town in 1960.

The Verulamium (1960) hoard of barbarous radiates

This hoard of ninety barbarous radiates was discovered during the excavation of a house in Insula XIX, in 1960, and it has been fully published (Mattingly 1971). Professor Mattingly illustrated eighty-seven of the coins in two places, enabling comparison of these coins with other collections.

No internal die-links were present. However, Mattingly recognised several style-links which belonged to his previously established barbarous radiate mint groups (all of which are described in Mattingly, op.cit., 197). Two coins have the blurred fabric and neat style of a group which has examples in the Calverton, Worthing and Richborough hoards, and from Ancaster and South Witham in Lincolnshire (Chapter 4, group C).

One example of the Pax Aug group was also identified (Chapter 4, group A). Of particular interest to the current study is the presence of two examples of the Invictus/ewer group; one with the Invictus reverse and the second with a Nobilitas Augg variant.

The Verulamium (1960) hoard coins share the peculiar traits which have already been noted among the local site finds from Verulamium. Reference to Mattingly's illustrations will reveal angular portraiture, several square-cut flans (such as numbers 25, 27, 38, 62, 65 and 75), uneven and inaccurate legends and especially poorly engraved reverses.

The Verulamium hoard thus exhibits similarities to the finds studied from the site. Invictus/ewer group coins again comprise just over 2% of the coins and a very comparable range of quality and style has been seen, although it is difficult to point to specific style-links. This hoard would appear to comprise predominantly locally struck coins and strength is added to the suggestion that the Invictus/ewer group originated in the vicinity.

The hoard of radiate minimi from the Verulamium Theatre

The hoard of radiate minimi discovered in the Verulamium Theatre was of particular importance because it was to prove conclusively that such coins were in circulation by c. AD 300. The publication of the hoard was an important addition to the debate on the chronology of barbarous radiates and has been referred to in chapter 2 (T.V.Wheeler 1937). Wheeler's paper is noteworthy for its full illustration of the 796 barbarous radiates, which are of particularly small size. No less than 616 range from just 8 mm down to just 3/4 mm. The smallest examples are unusually tiny for barbarous radiates, which are

hardly ever known to fall below 6 mm diameter in Britain. It is noted that Fel Temp Reparatio, Fallen Horseman, imitations of the fourth century are regularly found to fall below this size.

The portraiture displayed on the Theatre hoard coins is often remarkably good for such small coins. Engravings are precise and clear. Other features of these imitations are the frequent omission of legends, which could not be fitted on to such small flans, and their generally unworn condition.

The Verulamium Theatre hoard coins contrast with the 1960 hoard coins. They are smaller and better engraved. Only three coins from the latter hoard fall below 13 mm diameter. If the tiny coins in question were used individually in everyday circulation, similar examples have not been recovered from sites during excavation. However, their diameters would mean that their recovery would be almost impossible. They may even evade sieving and their bronze/olive colour makes them even harder to spot by eye, on the ground.

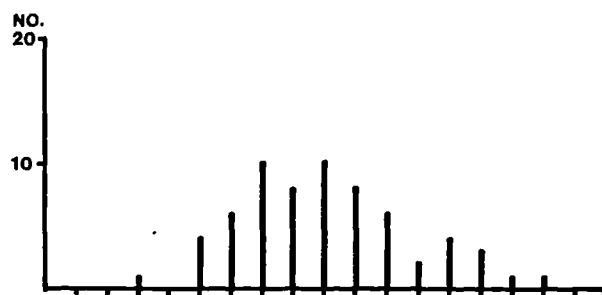
If the decline in the module of barbarous radiates did continue over time, the Verulamium Theatre hoard will represent the very latest phase in their production. Mattingly has suggested a burial date for this deposit of between c. AD 282-6 (Mattingly 1971). Whether these small imitations were struck locally or imported to this area is impossible to tell at this stage. There is a lack of comparable types known from which to argue such points.

Gorhambury villa (TL 1107)

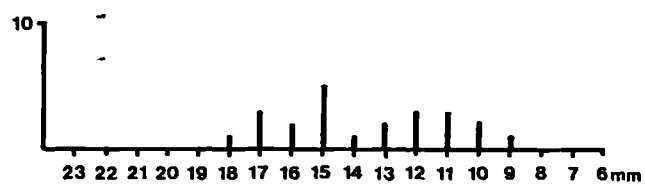
The villa of Gorhambury lies just one kilometre north west of Verulamium. It was initially excavated between 1956 and 1961.

CENTRAL EMPIRE	NO.	%
Gallienus		
Claudius II	2	3.1
Divo Claudio - altar	5	7.8
- eagle	4	6.3
TOTAL CENT. EMP.	11	17.2
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	7	10.9
- Pax Aug	3	4.7
- Other	<u>1</u>	
Total Victorinus	11	17.2
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg	1	1.6
- Laetitia	1	1.6
- Mars Victor		
- Pax Aug	3	4.7
- Pietas	6	9.4
- Salus Augg	3	4.7
- Spes	8	12.5
- Victoria/Comes Aug	2	3.1
- Virtus Augg	1	1.6
Tet. I, uncertain rev.	1	1.6
Tet. II, uncertain rev.		
Total Tetrici	26	40.6
Other types		
TOTAL GALLIC EMP.	37	57.8
Uncertain minimi	7	
Unclassifiable	9	
GRAND TOTAL	64	
Total minimi	17	26.6

Fig.8:14 Summary of types from Gorhambury villa



Gorhambury Villa



Boxmoor Villa

Fig.8:15 Coin diameters: Gorhambury and Boxmoor villas

The sixty-four barbarous radiates studied here come from more recent excavations by David Neal, in the 1970's.

The types present among the sixty-four barbarous radiates from Gorhambury are listed in figure 8:14. The Central Empire total is relatively high, accounting for 17.2% of the total. Otherwise, the breakdown of types is normal. The sizes are shown in figure 8:15. The graph is bell-shaped, with its top at 15 mm - 17 mm.

Eleven Gorhambury coins are illustrated in Plate 8:5. Number 19 shows Tetricus I coupled with the Pietas reverse. The portrait is very linear and simple; not unlike that shown in number 21. Number 17 is a very clearly preserved copy of Tetricus I, coupled with the Pax Aug reverse. The figure of Peace shows a shortened outstretched arm, which has been noted among other copies in England and may eventually help to isolate another mint grouping. Number 22 is a very crude copy of Victorinus' Invictus, on a highly irregular-shaped flan.

Plate 8:5, 23 and 24 are copies of Victorinus' Pax Aug. The transverse sceptre can just be seen in each example, as can the letter V in the field, left. This mark is seldom reproduced on barbarous radiates. Two other distinctive copies are shown. Number 25 is a large copy with a bold representation of Tetricus II's portrait. The reverse reproduces Pietas Aug(q), with a full set of sacrificial implements shown. The portrait of Tetricus II on number 26 is much cruder, by way of contrast. It has been coupled with the Salus Augq reverse of Tetricus I.

Three examples of the Invictus/ewer group were recorded from Gorhambury (Plate 8:5, 16-18). Number 16 shows the distinctive V-shaped neck and the reverse legend is dashed. The ewer is indistinct but has been shortened. Number 18 is also the ewer variety, while 17 depicts Invictus.

Boxmoor villa (TL 0305)

Boxmoor villa lies approximately 10 kilometres to the west of Verulamium, on the south side of the Bulbourne stream. A total of twenty-three barbarous radiates have been recorded from the site, again from excavations by David Neal.

The types present are summarised in figure 8:16. The main feature of this group is the large proportion of minims, which account for almost half of the total. The range of sizes is shown in figure 8:15, in which the graph has a curious shape. A main peak is seen at 15 mm, below which there is a hump centred around 12 mm and 11 mm. However, it must be remembered that this is only a small assemblage and not too much weight should be placed on relative numbers present.

Just two of the Boxmoor coins have been illustrated in Plate 8:5. They both represent versions of types illustrated for Gorhambury villa. Number 27 is Pax Aug, of Victorinus. Number 28 is Pietas, with a portrait of Tetricus II, which has a curiously prominent nose.

Other Hertfordshire sites

Single finds from Watford and near Cheshunt have been recorded in the catalogue. Six barbarous radiates were recorded from David Neal's excavations at Northchurch villa, some 16 kilometres west of Verulamium. Five of these are now badly pitted with corrosion and the other is illustrated in Plate 8:5, 29. It is a copy of Tetricus II, identifiable by the absence of a beard. The reverse shows Spes.

Oxfordshire, Buckinghamshire and Hertfordshire - a summary

Coins have been studied from a high number of individual findspots, in this chapter. Although they have not all been

CENTRAL EMPIRE	NO.	%
Gallienus		
Claudius II	2	8.7
Divo Claudio - altar		
- eagle		
	<u>—</u>	
TOTAL CENT. EMP.	2	8.7
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus		
- Pax Aug	1	
- Other	<u>1</u>	
Total Victorinus	2	8.7
Tetricus I and II		
- Fides Militum		
- Hilaritas Augg		
- Laetitia		
- Mars Victor		
- Pax Aug	3	13.0
- Pietas	4	17.4
- Salus Augg	1	4.3
- Spes	1	4.3
- Victoria/Comes Aug		
- Virtus Augg		
Tet. I, uncertain rev.		
Tet. II, uncertain rev.	<u>1</u>	4.3
Total Tetrici	10	43.5
Other types		
TOTAL GALLIC EMP.	12	52.2
Uncertain minimi	6	
Unclassifiable	<u>3</u>	
GRAND TOTAL	23	
Total minimi	11	47.8

Fig.8:16 Summary of types from Boxmoor villa

mentioned here they are all listed in the full catalogue. In particular, many large collections (of over twenty coins in total) have been considered here.

A summary of the percentages of the main barbarous radiate categories from the larger sites is presented in figure 8:16. The relative percentages can be compared with figures 6:28 and 7:11, for the preceding chapters. The figures for Central Empire copies in figure 8:17 are less erratic than in the previous chapters; remaining more consistently at around 10%. The main types are again shown to be present in generally similar proportions. Four of the sites considered in this chapter have very high percentages of minims; with in excess of 40% of their assemblages.

The problem of classifying the cruder barbarous radiate types for comparative purposes has been emphasised in the case of Verulamium. A table such as figure 8:17 allows comparison between sites of the frequency of specific categories of imitation. Such inter-site comparison cannot take into account the differences of style and technique encountered on specific sites. The need for photographs in relation to any discussion of this coinage is emphasised, in order to show these differences. Some other interesting copies worthy of note from other sites considered in this chapter have been the silvered copies of Gallienus and Victorinus, of large module, from Lowbury Hill and Hambleton villa.

The number of die-links encountered within the large body of coins recorded for this chapter is very small indeed, as was the case in the preceding chapters 6 and 7. If a hoard were found which contained an equivalent number of barbarous radiates to that studied in this chapter, a higher number of die-links would be expected. The coinage studied here is a

	WOODEATON	SHAKENOAK	LOWBURY HILL	ASTHALL	OXON. SITE	HAMBLEDEN VILLA	VERULANIUM MUS.	VERULANIUM FRERE	GORHAMBURY VILLA	BOXMOOR VILLA
TOTAL CENT. EMP.	10.7	10.3	17.8	8.8	9.8	20.0	2.7	10.8	17.2	8.7
Divo Claudio	5.7	5.7	13.4	5.9	2.4	10.0	1.2	7.7	14.1	-
TOTAL GALL. EMP.	54.2	37.9	57.8	41.2	43.9	60.0	52.7	56.2	57.8	52.2
Tot. Victorinus	13.6	4.6	11.1	5.9	7.3	12.5	9.3	6.2	17.2	8.7
Invictus	2.3	3.4	4.4	5.9	-	10.0	4.9	1.5	10.9	-
Tot. Tetrici	39.5	25.3	42.2	29.4	36.6	32.5	36.3	49.2	40.6	43.5
Pax	5.1	2.3	6.7	5.9	4.9	5.0	9.3	11.5	4.7	13.0
Salus	5.1	1.1	4.4	2.9	2.4	2.5	3.9	5.4	4.7	4.3
Spes	5.1	2.3	8.9	-	7.3	5.0	4.6	7.7	12.5	4.3
TOTAL MINIMI	30.5	41.4	20.0	55.9	51.2	27.5	37.8	26.9	26.6	47.8
ASSEMBLAGE	—	—	—	—	—	—	—	—	—	—
COIN TOTAL	177	87	45	34	41	40	637	130	64	23

Fig.8:17 Barbarous radiate types from sites in Oxon.,
Bucks and Herts

mixture of well-circulated everyday coinage, representing the earliest to the very latest barbarous radiates used in Britain. It is the larger site assemblages which offer most hope for the continued establishment of die- and style- groups.

The most interesting features to emerge from the study of this region's coinage have come from the site of Verulamium. The domination of the assemblage by very crudely engraved copies and the high proportion of cut and square-shaped flans is a feature of the site and betrays a local manufacture for them. The high number of Invictus/ewer group types at Verulamium, in the Verulamium (1960) hoard and at the nearby Gorhambury villa, all indicate that they too originate from a local centre of production. In the case of that specific group, sub-groups have been recognised and expanded by the association of additional examples from other sites. The main Invictus/ewer sub-groups will be documented and discussed further in chapter 12.

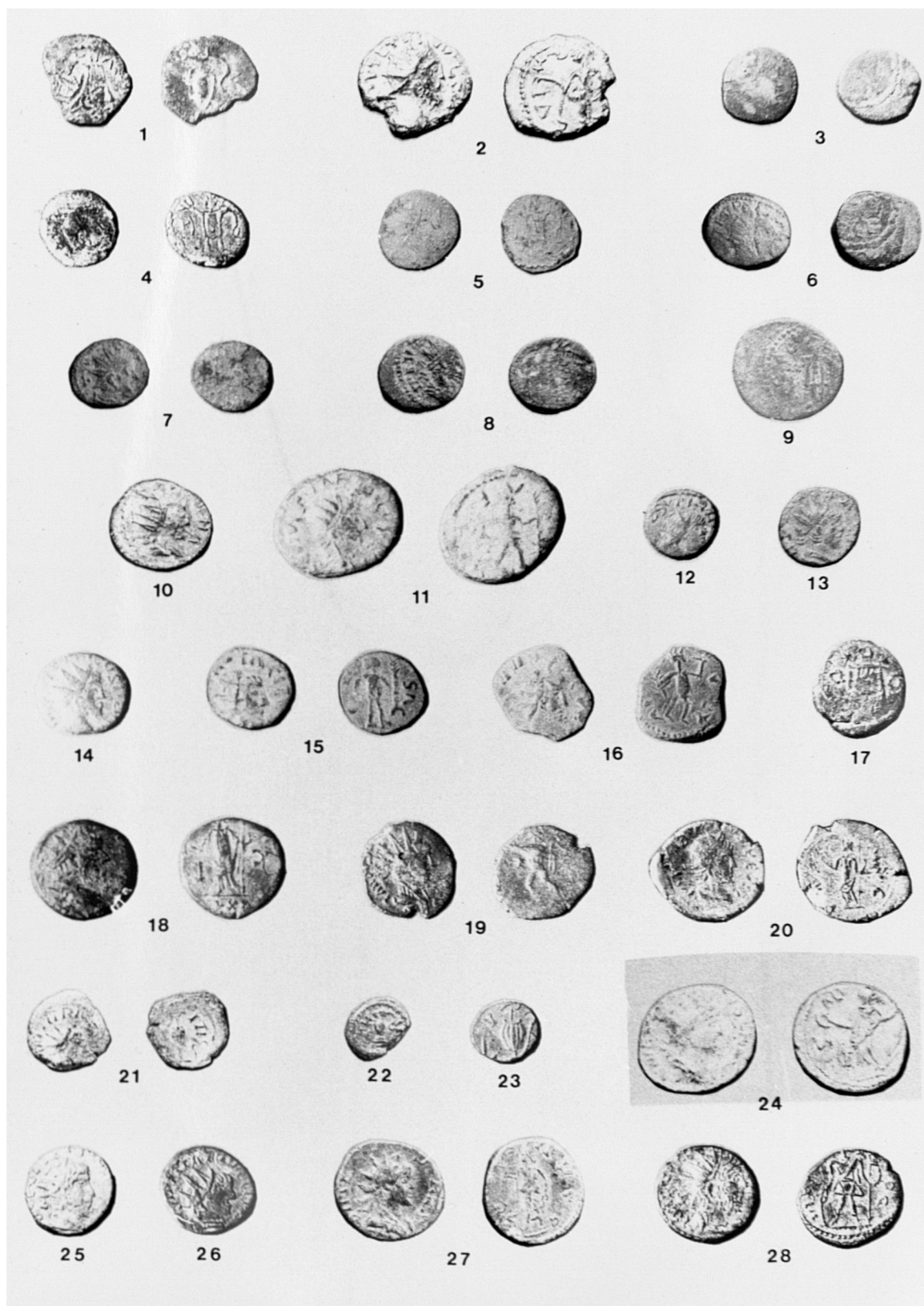


Plate 8:1 Woodeaton. Scale 1:1



Plate 8:2 Shakenoak, Asthall, an unprovenanced site from Oxfordshire and miscellaneous Oxfordshire finds. Scale 1:1

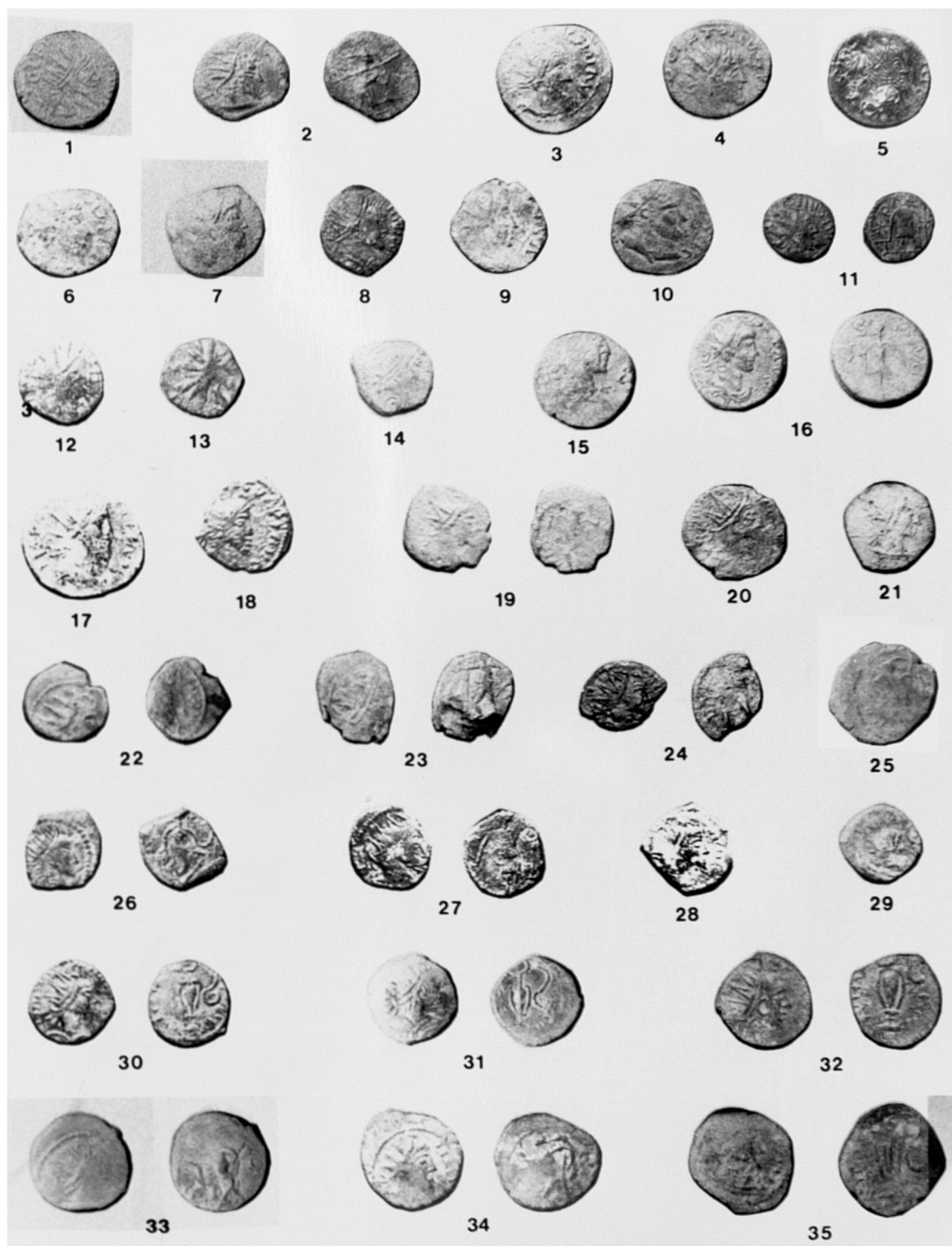


Plate 8:3 Verulamium. Scale 1:1

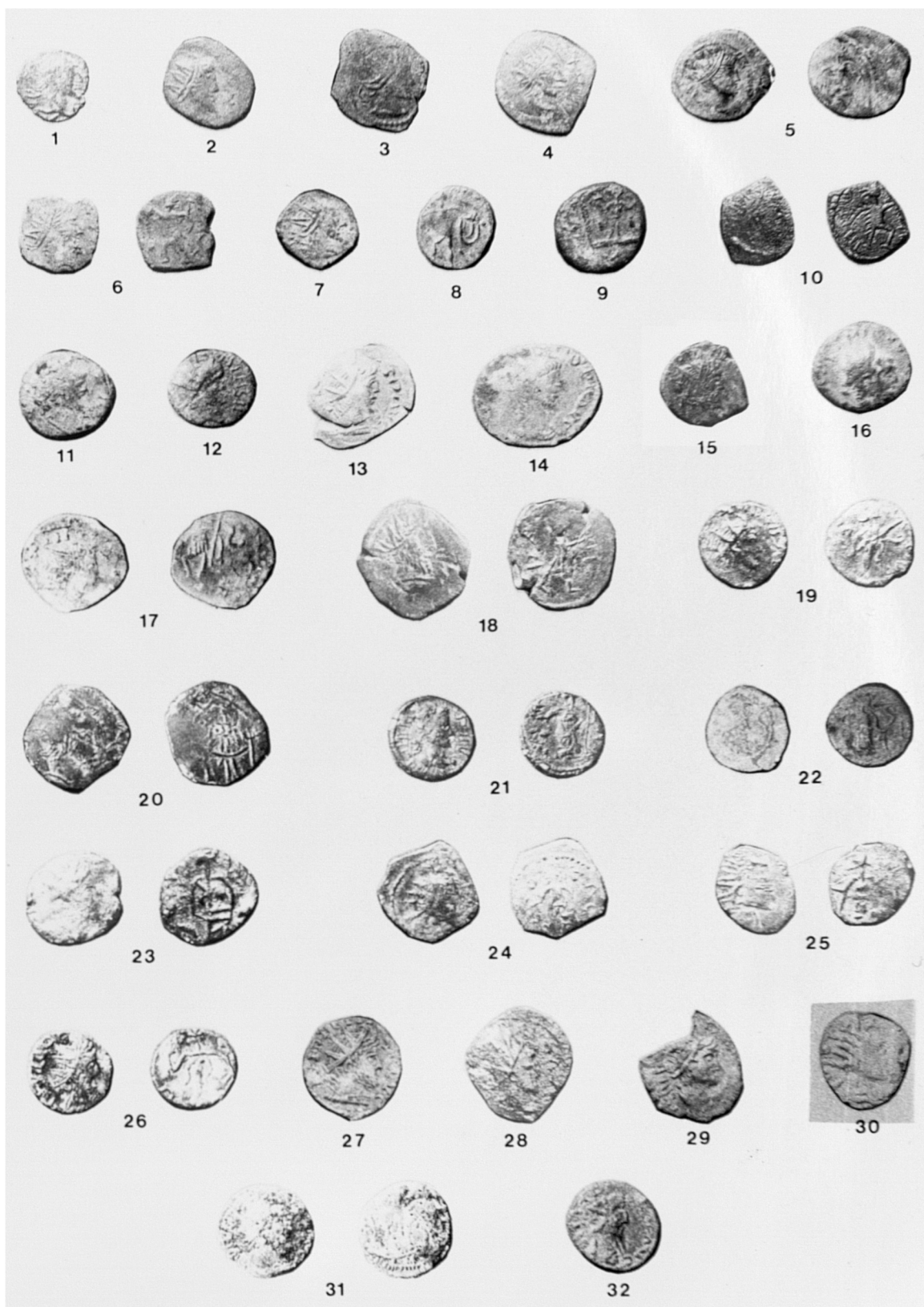


Plate 8:4 Verulamium. Scale 1:1

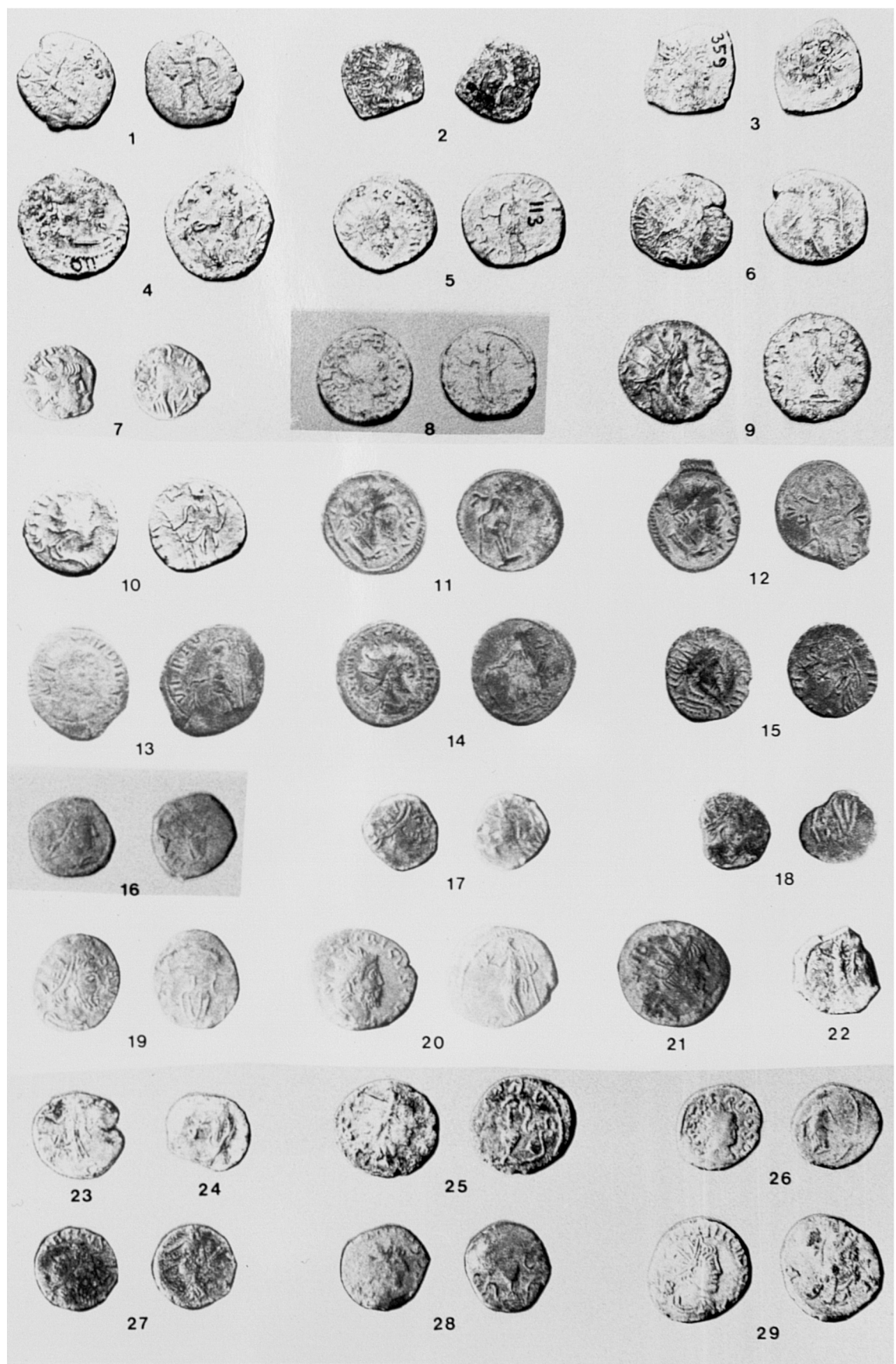


Plate 8:5 Hambleden Villa, miscellaneous Buckinghamshire finds, Gorhambury, Boxmoor and Northchurch.
Scale 1:1

Chapter 9. Sussex

The barbarous radiates from just one county are considered in this chapter. Sussex forms the south-eastern coastal boundary of the survey area. It does not contain a high number of site finds but the county does have many important late-third century hoards, which contain large numbers of barbarous radiates. These hoards warrant specific consideration. The finds and hoards come almost entirely from sites on the coastal plain and on the South Downs. None come from the High Weald, further inland. The locations of the sites considered in this chapter, as well as those of the hoards, are shown in figure 9:1.

Barbarous radiates have been recorded from twenty Sussex sites. A variety of site categories are once again covered, including the civitas capital Chichester, the palace of Fishbourne and smaller sites. Just four of the sites yielded above twenty examples. Most come from Chichester. Thirteen produced just a single coin each. In total, 198 site finds have been recorded.

Ten hoards are considered in this chapter, containing different numbers and proportions of barbarous radiates. Some hoards, such as Beachy Head (1973) contain good copies, of large module. Others, such as those from Worthing, Goring-on-Sea and Hove, contain imitations of reduced module. The different categories of barbarous radiate hoard will be considered in chapter 13. However, the concentration of these hoards on the coastal plain of Sussex does deserve some separate discussion with relation to the irregular coinage of this county.

Summary of the coins recorded from Sussex

The numbers of the sites and hoards listed below correspond to the locations shown in figure 9:1.

Sites

- | | |
|------------------------------|-------------------------------|
| 1. Bow Hill (3), | 2. Brighton (1), |
| 3. Dale Hill, Brighton (1), | 4. Bulverhythe (1), |
| 5. Chanctonbury (6), | 6. Charleston Brow (21), |
| 7. Chichester (69), | 8. Near Chichester (6), |
| 9. Chilgrove villas (53), | 10. Eastbourne (1), |
| 11. Fishbourne (24), | 12. South of Fishbourne (1), |
| 13. Hassocks (1), | 14. Cliffe Hill, Lewes (1), |
| 15. Patcham (1), | 16. Pevensey Castle (1), |
| 17. Sweet Hill, Patcham (1), | 18. Telscombe (1), |
| 19. Washington (1), | 20. Wyndham Country Club (1). |

Hoards

The size of the hoard is shown in brackets, followed by the number of barbarous radiates present.

21. Beachy Head II, found 1899	(2073)	9
22. Beachy Head III, found 1914	(550)	3
23. Beachy Head IV, found 1961	(5294)	37
24. Beachy Head VI, found 1973	(5540)	44
25. Brighton	(928)	225
26. Selsey	(996)	1+
27. Chichester	(10)	10
28. Worthing	(2069)	2067
29. Goring-on-Sea	(433)	432
30. Hove	(455)	455

Total imitations 3283+

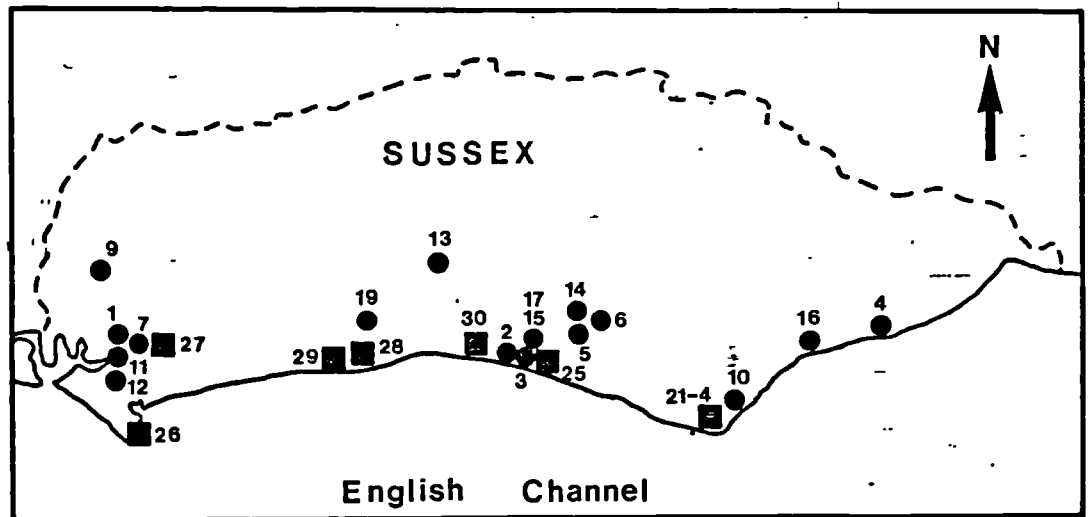


Fig.9:1 Map of sites and hoards in Sussex. Scale 1:1,000,000

From the total barbarous radiates listed in these hoards, all have been studied at first hand except for the Beachy Head and Brighton hoards. In addition, photographs of the examples present within the Beachy Head (1973) hoard have been seen. Thus, over 90% of the hoard examples have been personally inspected. Together with the site finds, a total of 3481 barbarous radiates have been recorded from this county.

The site finds

The study of the Sussex barbarous radiates will begin with the site finds. All illustrated examples have been reproduced in a single Plate, 9:1.

Chichester (SU 8605)

Chichester (Noviomagus) was a civitas capital. It was situated between the Fishbourne Channel and the River Lavant. Main roads led to Bitterne, Silchester, Selsey and London (Stane Street). Despite these communications, the site was not a major route centre like the towns of Silchester, Winchester and Neatham, discussed in chapter 7. The barbarous radiates listed from Down's excavations form the largest site assemblage recorded from the county, with sixty-nine examples.

The types present

The range of types present is shown in figure 9:2.

The first coin of interest is that shown in Plate 9:1, 4. This coin has been classified as Gallienus because of the dotted-style of beard engraving, rather than Victorinus, as the reverse figure of Sol would otherwise suggest. The portrait, which is partly missing, shows more affinity to Gallienus generally than to the latter emperor. In this case, the

	<u>CHICHESTER</u>		<u>FISHBOURNE</u>	
CENTRAL EMPIRE	NO.	%	NO.	%
Gallienus	1			
Claudius II	1			
Divo Claudio - altar	4	5.8	5	20.8
- eagle	1		1	
	-		-	
TOTAL CENT. EMP.	7	10.1	6	25.0
GALLIC EMPIRE				
Postumus	1			
Victorinus				
- Invictus	4	5.8		
- Pax Aug				
- Other	-		2	
Total Victorinus	4	5.8	2	8.3
Tetricus I and II				
- Fides Militum				
- Hilaritas Augg			1	
- Laetitia	1		1	
- Mars Victor				
- Pax Aug	9	13.0	4	16.7
- Pietas	1		1	
- Salus Augg	2		1	
- Spes	4	5.8		
- Victoria/Comes Aug	2			
- Virtus Augg	3		2	
Tet. I, uncertain rev.	3			
Tet. II, uncertain rev.	3		-	
Total Tetrici	28	40.6	10	41.7
Other types	5		3	
TOTAL GALLIC EMP.	38	55.1	15	62.5
Uncertain minimi	12		2	
Unclassifiable	12		1	
	-		-	
GRAND TOTAL	69		24	
Total minimi	17	24.6	4	16.7

Fig.9:2 Summary of types from Chichester and Fishbourne

reverse would be Oriens Aug, probably copied from RIC V: 494. There are two coins in the Paternoster Row hoard from London with similar engravings, although these may be copies of the more common Invictus.

Plate 9:1, 5 has been illustrated because large copies with such crude engravings are rare. This imitation of the Tetrican Spes has been very poorly executed, with no legend extant and an unrecognisable obverse portrait. Number 6 in the Plate is a good, if somewhat flat, engraving of Tetricus II, incorrectly coupled with a Virtus Augg reverse of Tetricus I. The engraver perhaps intended the type Princ Invent, which is similar in appearance. The coin illustrated in Plate 9:1, 14 carries an interesting portrait engraving of Tetricus II. It is a minim and the reverse type is illegible.

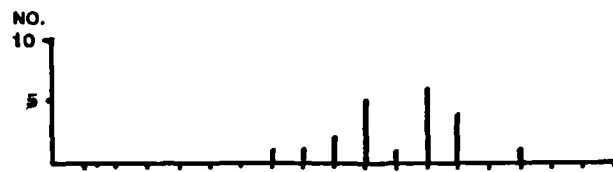
The diameters of the Chichester coins have been recorded in figure 9:3. They range from 24 mm to 8 mm. There is a single peak at 16 mm and the bulk of examples are found within the 17 mm - 12 mm range.

Die- and style-linking

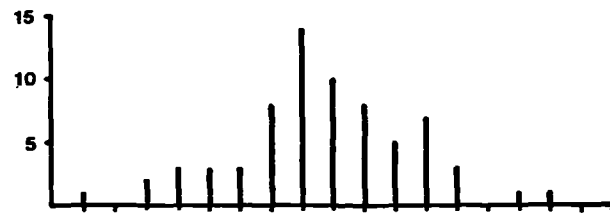
There is no internal die-linking within this assemblage. Two coins share very close obverse engravings and these are shown in Plate 9:1, 8 and 9. These odd copies of Tetricus II share similar facial proportions, except for the ear-to-nose distance. Three other coins, all of medium size (catalogue numbers 41, 42 and 46), are very crudely executed and do not look similar in style. However, they all possess reverse legends formed by the letters C and O, only. This odd trait may betray a common origin. Although not close stylistically, they are all equally crude and their dies were clearly quickly engraved. Two of these coins are illustrated in Plate 9:1, 36-

7. Other than these five examples, it was not possible to find evidence of possible local production.

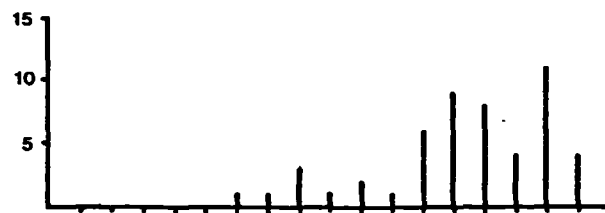
External links include the ubiquitous Invictus/ewer types. Three examples are present; illustrated in Plate 9:1, 11-13. Number 11 carries the ewer form, which dominates its entire reverse, and with no other detail present. The body of the ewer contains an elliptical shape within an outer solid border, which constitutes the shape of the jug. The other examples encountered which bear close resemblance to this coin come from Verulamium (Plate 8:3, 32), Wooddeaton (Plate 8:1, 1), Richborough (Davies 1982b, Plate 2, 12-13), London (Plate 10:2, 20), and the Goring-on-Sea hoard (Mattingly 1967b, 25 and 27). These can all be seen to originate in the east of the survey area of this thesis. The example shown in Plate 9:1, 13 is a very crude Invictus variant and is similar to examples recorded from Richborough (Davies 1982b, Plate 2, 10 and 11. Only the reverses are shown). The coin shown in Plate 9:1, 12 is more carefully engraved than most within the overall group; with the unusual addition of a dotted beard and hair. The reverse carries a reversed figure of Invictus. The legend is typical of many others from the group, comprising a series of dashes. The observe most closely resembles examples encountered at Verulamium (Plate 8:3, 19 and 20) and at London (Plate 8:3, 21). In fact this coin has even better stylistic affinity to several others in a hoard from Entrains (Nievre), in Gaul (Nicolet-Pierre 1978, numbers 237, 239 and 330-2 - all illustrated). All of the Gallic examples cited share the same facial shape, dotted beard and style. Other coins present in the hoard share similar characteristics, if not close style. A common origin with the Chichester coin is very likely.



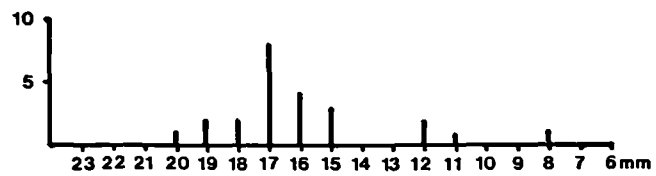
Charleston Brow



Chichester



Chilgrove



Fishbourne

Fig.9:3 Coin diameters: Charleston Brow, Chichester, Chilgrove and Fishbourne

A group of six close style-links from Verulamium, with squat features, was described in chapter 8 (Plate 8:4, 11-16). This type has not been encountered at any other site, except for a single example from Chichester (Plate 9:1, 7). This coin was probably struck in the Verulamium area. A die-link has also been found with the site of Neatham. The coin in question copies the Oriens Aug reverse of Postumus (Elmer 568/9) and has been classified under that emperor. The reverse shares a die with the Neatham coin but the obverse is quite different. This link is discussed in chapter 7, in the Neatham section.

A nucleus of die- and style-links are present at Chichester. The single Gallic die-link is of greater importance when considered alongside the previous southern coast examples, from Colliton Park, Bitterne and from the site of Neatham further inland. Apart from this link, the main axis of linking is clearly with the east of England and this is the first occasion where such a direction in the linking has been recorded.

Fishbourne (SU 8304)

The palace of Fishbourne did not maintain its high level of sophistication after the late first century. However, it was still in an impressive state of preservation during the third quarter of the third century and parts are known to have been modified during those years (Cunliffe 1971). Two hundred and sixty-five coins were recovered from the excavations between 1961 and 1969, of which just twenty-four are barbarous radiates.

The types present have been summarised in figure 9:2. Twenty-five percent are Central Empire types and 70% are Gallic Empire, of which Pax Aug is the most numerous. Just four minimi were recovered, which is under 17% of the total. The

range of sizes is shown in figure 9:3. The coins range between 20 mm and 8 mm, with most falling between 17 mm and 15 mm.

Two Fishbourne coins are of special interest, sharing close stylistic similarity with coins from the site of Gorhambury, Hertfordshire. Plate 9:1, 16 has the reverse type Hilaritas and 17 has the reverse Pax, but both share a distinctive obverse style, characterised by the beard and angle between the nose and eye. The two Gorhambury examples in question have been illustrated in Plate 8:5, 14, and 15). The first of these is another Pax Aug copy and shares the same shortened, truncated, outstretched forearm of the Fishbourne coin. The treatment of the beard and eye, on the obverse portrait, is distinctive in all four examples. A Chichester coin, illustrated in Plate 9:1, 10, again shows this style and may be yet another example of a common mint. One other coin from Fishbourne has been illustrated in Plate 9:1, 19. This is a copy of Pietas Aug of Victorinus (Elmer 741-2), which was seldom copied. The clarity of the reverse legend confirms the identification in this case.

The Chilgrove villas (SU 8314)

Two villas lie in the Chilgrove Valley, some six miles north of Chichester. They have been the subject of extensive excavations (Down 1979). Fifty-three coins from these sites were made available for study at Chichester Museum.

The coins studied from this source do not appear to represent a typical site assemblage. There is a bias towards coins of smaller module, as shown in figure 9:3. This group included coins not listed by Down in his excavation report (Down 1979) and it is considered likely that some contamination

of the collection has taken place. It is possible that a small hoard group has become associated with the original site finds. However, all of these coins have been fully listed in the accompanying catalogue. Most are badly chipped and worn. All are unworthy of illustration. No die- or style-links were found.

Smaller Sussex sites

The other Sussex sites listed have produced smaller numbers of barbarous radiates. The only assemblage of any appreciable size is that from Charleston Brow, which was an Iron Age and Romano-British settlement, situated inland from Newhaven. Twenty-one barbarous radiates come from this site, which are summarised in figure 9:4. Tetrican imitations predominate, with 85%, followed by copies of Victorinus. Pax Aug and Hilaritas Augg are the most common types. Divo Claudio imitations are completely absent. All examples are worn and crumbling, and none have been illustrated. The sizes are recorded in figure 9:3, showing most to fall between 14 mm and 11 mm, which is particularly small. One particular minim has been ascribed to Gallienus, with a reverse which shows a doe walking left. The engraving is almost cartoon-like in quality. No clear examples of linking were found.

Three examples come from the rural temple at Bow Hill. One is shown in Plate 9:1, 22. This is a very good copy of Victorinus' Invictus, as struck at Cologne. The obverse lettering is slightly slack, but the reverse legend is more clearly wrong, comprising letters far too large. One coin from Brighton is illustrated in Plate 9:1, 1. Two other Tetrican examples from Bow Hill were published by Hill (P.V.Hill 1951a). Most Divo Claudio copies encountered tend to

CENTRAL EMPIRE	NO.	%
Gallienus	1	
Claudius II		
Divo Claudio - altar		
- eagle		
	—	
TOTAL CENT. EMP.	1	4.8
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	1	
- Pax Aug	1	
- Other	—	
Total Victorinus	2	9.5
Tetricus I and II		
- Fides Militum	1	4.8
- Hilaritas Augg	4	19.0
- Laetitia		
- Mars Victor		
- Pax Aug	3	14.3
- Pietas		
- Salus Augg	2	9.5
- Spes		
- Victoria/Comes Aug		
- Virtus Augg		
Tet. I, uncertain rev.	1	
Tet. II, uncertain rev.	—	
Total Tetrici	11	52.4
Other types	—	
TOTAL GALLIC EMP.	13	61.9
Uncertain minimi	5	
Unclassifiable	2	
	—	
GRAND TOTAL	21	
Total minimi	12	57.1

Fig.9:4 Summary of types from Charleston Brow

be difficult to distinguish from poorer, smaller, official issues. The Brighton example is more obviously irregular. In addition to the unusual style employed in the portrait and altar, the reverse legend betrays its non-official origin. Insufficient space was allowed for the lettering, which has been abbreviated and spills into the exergue.

Six barbarous radiates were recorded from the rural temple site of Chanctonbury, two of which are illustrated. The first (number 2 in the Plate), is a member of the Invictus/ewer group. It carries the dashed legend obverse, but completely lacks any legend on the reverse. The engraving shows Invictus. This example shows a particular closeness of style with Verulamium examples, illustrated in Plate 8:3, 25 and 33. A second Chanctonbury coin (Plate 9:1, 3), copies the Mars Victor reverse type used by Tetricus I. The reverse follows Elmer 794, although the obverse legend is incorrect. The size is also reduced and the engravings have been simplified from the original type.

Unprovenanced coins from Brighton Museum

Unprovenanced barbarous radiates are present in all museum collections. Such coins are generally not considered in this study because they add nothing to our knowledge of the distribution of known types. However, some such types can be useful. Such a group of minims was recorded from Bristol City Museum (chapter 6) and a large but unprovenanced site assemblage from Oxfordshire was recorded in chapter 8. Three unprovenanced examples were seen in Brighton Museum, which are obverse and reverse die-links. They are Sussex finds and this group is considered to be worthy of recording. These coins are shown in Plate 9:1, 23-5. All three obverses die-link, while

the reverses of 23 and 24 die-link but that of 25 is different. The group was documented as having been donated by P. Wilmer. These interesting coins may eventually be shown to be part of a larger Sussex die-group.

Summary

The range of types represented among the barbarous radiates recorded from Sussex sites is consistent to that recorded in the other areas studied, in chapters 6-8. Gallic Empire types predominate strongly. It is difficult to comment on the proportion of minims present on these sites. At only four of the collections studied does the total exceed twenty examples. The percentages at these vary greatly, between 16.7% at Fishbourne and 57.1% at Charleston Brow. In general, there is certainly no shortage of minims within the coinage of this area.

Instances of die- and style-linking are minimal, as might be expected from comparatively few examples. In the cases of chapters 6, 7 and 8, large sites were shown to have many external links with other sites right across the south of England. In the case of Sussex, very little evidence for local manufacture was encountered. With regard to links outside the area, there is a definite association with the eastern counties, to the exclusion of sites in the west. Several links have been found with the Verulamium area, including examples of the Invictus/ewer group. It has been suggested that this overall group embraces a number of sub-groups. The examples at Chichester are closest to others from the south east of Britain and may be part of a regional sub-group serving that part of the province. This question will be reviewed in chapter 12.

One further important continental link was discovered, between Chichester and the Entrains hoard. This reinforces the contacts observed in previous chapters between sites along the south coast and Gaul.

In general, the small number of coins has precluded fuller quantitative analysis among Sussex barbarous radiates. The more interesting coins encountered have been illustrated in Plate 9:1. Attention will now be turned to the Sussex barbarous radiate hoards.

The Sussex barbarous radiate hoards

Ten Sussex hoards which contain barbarous radiates will be considered here. The high number of these hoards with coastal locations is of particular interest. The coastal position of late-third century hoards is not unique to Sussex and has also been recorded in Norfolk (Davies and Gregory, forthcoming). However, in the case of Sussex, specific groups of hoards do seem to be related; in particular the group from Beachy Head and the three hoards from Worthing, Goring and Hove. These deposits are of greatly varying size and contain coins of large and small module.

The Sussex hoards will be considered in three sections. Firstly, a single unpublished hoard from Chichester will be reported in detail. Secondly, six published hoards, which contain numbers of both regular and irregular antoniniani will be discussed. Thirdly three minim hoards, containing very few regular coins, will be reviewed together.

A. The Chichester hoard of barbarous radiates

A small hoard of ten barbarous radiates was found in Chapel Street, in the north-west quadrant of Chichester, during

excavations in the city in 1971. These are an unremarkable collection of coins, being both badly worn and very poorly engraved. Flan shapes are all highly irregular.

Catalogue

Obverse	Reverse	Diameter	Die-axis	Plate No.
1. <u>Divo Claudio</u>	<u>Consecratio</u> - eagle	15 mm	5	26
2. Illegible	Very poor <u>Invictus</u>	15 mm	Illeg.	27
3. (Victorin)US	Illegible	15 mm	2	28
4. Victorinus	Female fig., left	19 mm	2	29
5. Illegible	<u>Pax Aug</u> - vertical sceptre	17 mm	11	30
6. Illegible	<u>Pax Aug</u> - vertical sceptre	18 mm x 14 mm	1	31
7. No legend	<u>Pax Aug</u> - vertical sceptre	17 mm	10	32
8. Tetricus II	<u>Pax Aug</u> - vertical sceptre	21 mm x 17 mm	5	33
9. (Te)TRICUS - (I)	(Vir)TUS AUG	16 mm	2	34
10. Tetricus I	Illegible	16 mm	Illeg.	35

These coins each weigh between 1.02 g and 2.36 g, with seven falling between 1.15 g and 1.58 g - with a variation of less than half a gram. The coins are illustrated in Plate 9:1, 26-35, as indicated in the catalogue. A poor state of preservation precludes much discussion about the types present. Legends, or parts of legends, are visible on six coins but are only accurate in numbers 3 and 9. The reverse legend is

comprised of the letters O and C, which is similar to several other coins recorded from excavation in the city and noted above. The reverse shows a simplified female figure, left. It could be that this hoard of poorly struck imitations was produced locally at the same workshop that produced those site finds. However, there is no die-linking either within the hoard or with other collections.

It is very difficult to argue a date for a hoard of this kind. The absence of datable regular issues poses an initial problem. The range of module between approximately 15 mm and 21 mm and the total absence of minims - the latest phase of barbarous radiates - would imply a date of up to 276 AD. However, the earlier imitations tended to be better engraved, which is not the case with these examples. The presence of a copy of Tetricus I's Virtus Augg, from his fifth issue at Cologne shows that the hoard was not earlier than 273/4 (the date of that issue). Consequently, a deposition date of the mid-270's, perhaps between 275-6, is considered most likely. It is noted that this hoard, comprising solely crude imitations of large module and lacking regular coins, is rare, as will be shown in chapter 13.

B. Large module barbarous radiate hoards from Sussex

Six hoards will be considered in this section.

The Beachy Head hoards

Although just four hoards from Beachy Head have been listed as containing barbarous radiates, there have been six which have been found in the same area. Roger Bland has considered all of these together, in his publication of the most recent Beachy Head hoard, discovered in 1973 (Bland 1979). The three most

recently found deposits were buried within twenty yards of each other. These are argued by Bland to have been collected by the same hoarder and buried together in about AD 274. The other three hoards continue into the reign of Probus.

Thirty-six of the forty-four irregular coins present in the 1979 hoard were illustrated by Bland. Two Victorinus, Invictus, copies were struck from the same pair of dies. This well-dated hoard provides good evidence for the dating of the good, well-struck, imitations present. The Beachy Head II (1899) hoard contained nine barbarous radiates and the Beachy Head IV (1961) hoard had thirty-seven. The Beachy Head III (1914) hoard is listed as having just a single irregular coin but this writer has personally noted three among the Consecratio, altar, issues alone - which are held at Lewes Museum.

In three of these hoards the irregular component represented less than one per cent of the total hoard. These copies were quite well struck and approached the size of regular coins. They clearly represent the earlier phase of copying. The small percentage of barbarous radiates present may reflect a smaller proportion of these coins within the currency of Britain in c. AD 274.

The recently published French hoard of Allonnes II has shown two coins to die-link with the Beachy Head (1973) hoard (Estiot, Amandry and Bompaire 1986).

The Brighton hoard

This hoard consisted of 928 antoniniani, of which 224 are imitations. The assemblage has been fully published (Casey 1974a). The imitations copied types of the emperors Gallienus,

Claudius II, Victorinus and the Tetrici. Casey used the large irregular component to help date the deposit to c. AD 275.

The Selsey hoard

This hoard of 966 antoniniani, ranging from Elagabalus to Quintillus was dated to c. AD 270 (Mattingly 1933). No mention of irregular coins was made in the hoard report but this writer found an irregular Invictus example within a small group of coins from the hoard, held at Chichester Museum. It is possible that others were present. This hoard has therefore been added to the list of hoards containing barbarous radiates.

C. Small module, mirim, hoards from Sussex

The three hoards considered in this section share a number of similarities. They can be associated by coin size, date and by die- and style-linking. They were also found within ten miles of each other.

The Worthing hoard

It was in 1964 that H.B. Mattingly published his report on the hoard of barbarous radiates from Mill Road, Worthing, which has been so influential on subsequent studies of this coinage (Lewis and Mattingly 1964). The hoard contained 2,067 copies, together with just two regular issues. The regular coins were issues of Gallienus (AD 268-70) and Divus Claudius (AD 270-c. 271).

Mattingly discussed the most important coins and illustrated a large number, in three Plates. The paper was also used as a vehicle for a wider discussion of this coinage. Among the die- and style-links identified, the author found products from the same mint as groups found in the Calverton, Nottinghamshire,

hoard. Links were also observed with the Hove hoard (which will also be considered, below). No links were found with those hoards containing the better, larger module, imitations.

It is not intended to duplicate Mattingly's work here, but it will be useful to consider other aspects of the hoard. The provision of many illustrations in Mattingly's paper means that only a bare minimum of examples need be reproduced here. A particular study has been made of the groups of coins associated by common dies, which have been weighed and measured. Some 150 examples are of particular interest; either because of their unusual types or because they die-link. These are summarised in groups here, as originally sorted by Professor Mattingly.

Group	Coin type	No. of Coins	Illustration (Lewis & Mattingly 1964)	Hoard Ref.
1.	Tacitus	2	-	10
2.	Probus	4	Pl.xvi, 5-6	11
3.	Mint-marked copies	5	Pl.xvi, 8-15	14
4.	Left-facing busts	11	-	15
5.	Severina	7	Pl.xvii, 15-21	16a
6.	Probus - helmeted	1	-	16b
7.*	Obv.die-identical. 8 diff.revs.	14	Pl.xvii, 25-30	17
8.*	Obv.and rev.die-identical. <u>Invictus.</u>	5	Pl.xvii, 24	18
9.*	Obv,die-identical. 2 revs. Head left.	4	Pl.xvii, 22-3	19
10.*	Obv.die-identical. Altar.	4	Pl.xvii, 31	20

11.*	Obv.and rev.die-identical. Altar/temple.	2	Pl.xvii, 32-3	21a
12.*	Obv.die-linked with group 11.	3		21b
13.*	Obv.and rev.die-identical. Heads left. Altar rev.	4	-	22
14.	Obv.and rev.die-identical. <u>Pax Aug</u> (vertical sceptre).	2	-	23
15.	Obv.die-identical. Similar revs.	2	Pl.xvii, 34	24
16.	Obv.die-identical. Similar 'star' reverses.	4	-	25-6
17.	Obv.die-identical.	4	Pl.xvii, 21-3	27
18.	Obv.die-linked with Hove hoard coins. Portrait with large eye.	4	Pl.xvii, 25	29
19.	Obv.in style of Calverton/ Worthing <u>Pax Aug</u> group. Obv.and rev.die-linked with Goring hoard.	2	-	30
20.	Calverton/Worthing <u>Pax Aug</u> group.	11	-	31
21.	Calverton/Worthing <u>Pax Aug</u> variant.	15	-	32
22.	Calverton/Worthing <u>Pax Aug</u> variant.	7	-	33
23.	Calverton/Worthing <u>Invictus</u> group.	15	-	34
24.	Obv.and rev.die-linked with 2 Calverton coins.	1	Pl.xvi, 25	35

25.	1 coin obv.and rev.die-linked with Calverton. 4 similar.	5	Pl.xvi, 27-30	36
26.	Calverton 'spongy fabric' group.	4	Pl.xvii, 3-6	37
27.*	<u>Invictus</u> - medium/ small module.	44	-	42
28.*	<u>Invictus</u> - 10 mm and under.	11	-	43
29.*	<u>Invictus</u> - reversed. Sol right.	6	-	44
30.*	Quintillus portraits. Obv.die-identical.	11	Pl.xvii, 7-13	68
31.*	Minims - assorted, with tiny portraits.	10	i.e. Pl.xviii	70
32.*	Tetricus I portraits - small/minim.	40	-	83

* The groups shown with an asterisk have been the subject of particular close attention. Some are die-groups and others associated by size and type. These groups are fully listed in the thesis catalogue, at the end of the Sussex section.

The above groups of coins from the Worthing hoard include strong associations with the hoards from Calverton, Goring and Hove, through die-linking. These hoards are likely to have been contemporary.

The problem of looking for a size or weight standard among barbarous radiate site finds has been discussed in previous chapters. These assemblages consist of worn coins of very mixed appearance, which were struck over a number of years. In

order to investigate the possibility of uniformity, it is necessary to compare coins likely to have been struck at the same time, preferably at the same mint, such as die-links. This hoard provides the opportunity to examine this aspect of the irregular coinage.

The die-groups listed above and which have been distinguished by an asterisk have been used for this study. In addition, five non-die groups have also been studied. These are groups 27-29 and 31-2 above, each of which contains coins of similar type and module. The weights of these coins have been plotted against their diameters in figure 9:5. In the top graph, the results from eight die-groups are shown; each group being represented by a different symbol. The coins in question are all very small. Groups 7-13 are all very restricted in size, with just a three or four millimetre variation. Group 30 shows a wider range, between 7 mm and 13 mm. The weights are quite closely restricted, all falling below 1.0 g, although it would be surprising if such small coins did weight more. The greatest variability recorded among die-linked coins was that of their thickness, which ranged between 1.0 mm and 2.0 mm in groups 7 and 10. A wider selection of coins from the hoard is presented in the second graph (also in figure 9:5), in which the values of four large non-die groups have been plotted. A much greater degree of variability is seen in this case, although the coins very largely fall into the minim classification. Of those coins which can be termed minims (of 13 mm diameter or less), there is a range in size down to eight millimetres and fluctuation in weight between 0.2 g and 2.1 g.

The overall impression gained from this analysis is that no strict standards were being used for the production of these imitations. There is a degree of cohesion within each die-

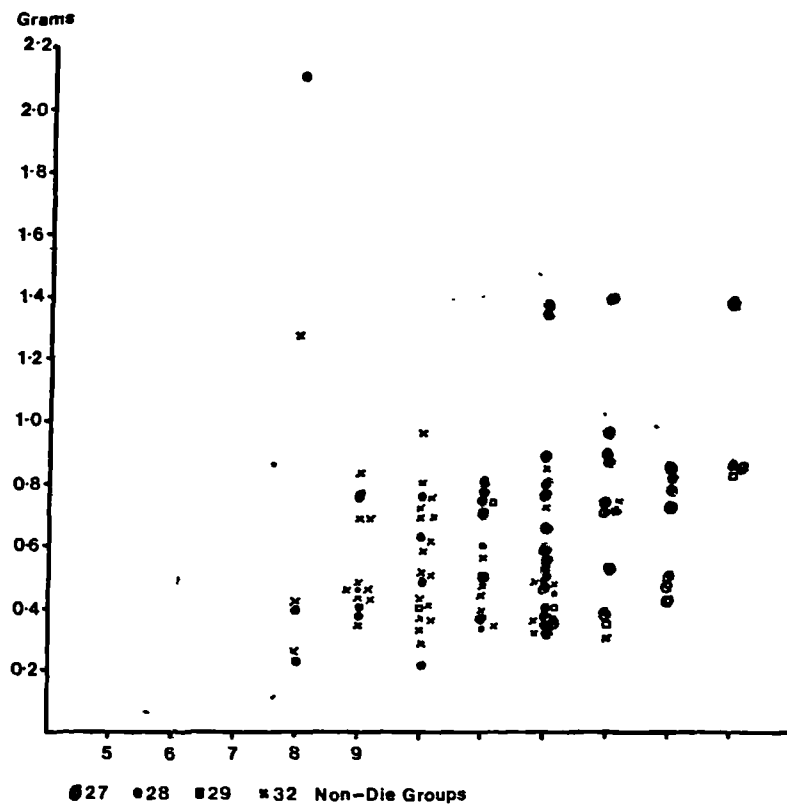
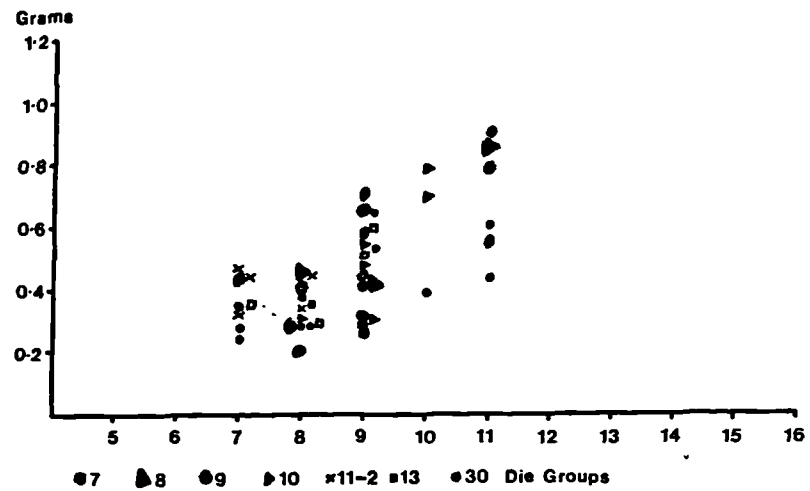


Fig.9:5 Worthing hoard: diameters and weights

group but this would have resulted merely from using small flans. Absolute precision is lacking. In the case of the larger sample considered, it is seen that there was no close precision adhered to in general. The only real unifying factor overall is the preference for smaller flans, as shown in figure 9:6. It is considered probable that the use of small flans was a result of factors other than that of a specified or agreed standard.

Figure 9:6 shows that just 12% of the Worthing coins were over minim size. Diameters fall as small as 5 mm but more than 53% range between 12 mm and 8 mm, inclusive. It seems that coin producers were aiming to produce flans in this approximate range, although a far wider range was obviously acceptable.

The lack of precision and variable quality of engravings adds to the overall picture. If small examples were not equally acceptable they would not have been purposely hoarded in this fashion. The process of striking coin, by many untrained workers, must have made variation inevitable. The preparation of flans and their splaying during the process of striking often caused further problems.

In conclusion, it can be said that the degree of variability recorded, particularly in the weight and thickness of coins, shows that a wide range of dimensions were acceptable at the time when the Worthing hoard was buried. At this date, c. AD 280-2 (Lewis and Mattingly 1964, 195), the physical appearance of the irregular coinage had changed from that current at the time of the burial of the three Beachy Head deposits, reviewed above, in c. AD 274. Although a close standard was not adhered to, irregular moneyers by about AD 280 appear to have aimed at a product with some particular specifications, although these were far divorced from a close resemblance to the official

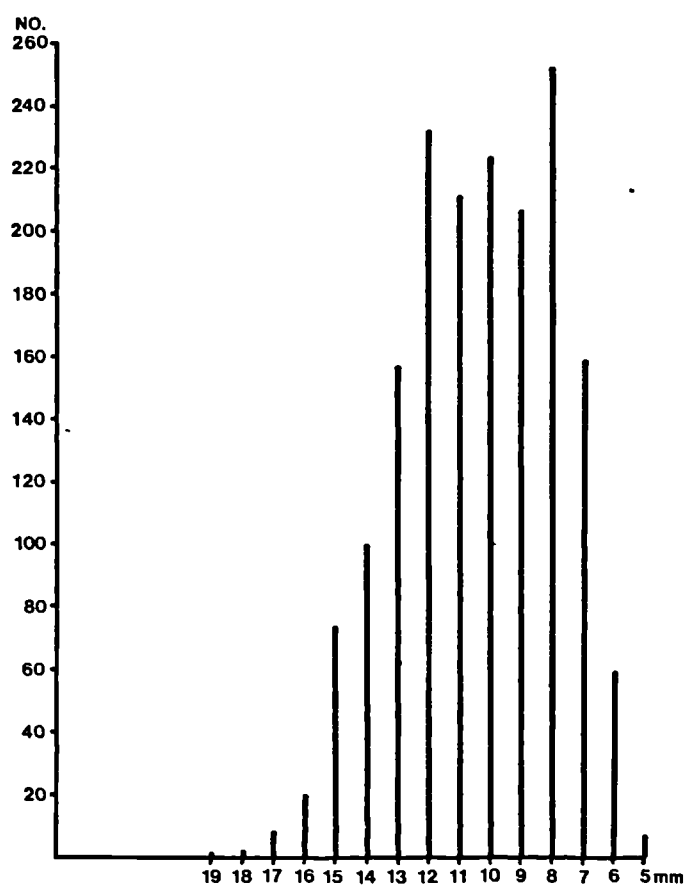


Fig.9:6 Coin diameters: the Worthing hoard

antoniniani. A diameter of between about 14 mm and 8 mm was favoured. An obverse portrait with radiate crown was always used and reverses were still based on official engraving types. The inevitable proportion of coin varying beyond this range of attributes was a result of so many untrained moneyers being involved. Such coins were not rejected but were used alongside the other coin.

It is noted that approximately 15% of the Worthing coins fall outside the size range of 13 mm to 8 mm. The diameters of coins have been measured across the widest part of flans and many of the 200 examples recorded as being above 13 mm are in fact quite comparable in appearance to the bulk of the hoard.

Finally, two external style-links must be added to those recorded by Professor Mattingly. One minim (Plate 9:1, 20) and possibly a second (number 21) belong to a group recognised from the west. These Claudius II types were recognised at Cirencester (Plate 6:2, 6-7) and at Silchester (Plate 7:7, 4 and 28). The second link is shown in Plate 9:1, 18. This curious minim has a reverse of Pax Aug, very similar to a coin from Verulamium (Plate 8:3, 11). The arms of the reverse figure join in an arch across the shoulders and droop almost to the ground. The flan sizes are identical and both carry vestiges of lettering.

The Goring-on-Sea hoard

H.B. Mattingly's report on the hoard of barbarous radiates from Goring-on-Sea, situated just to the west of Worthing, was published in 1967 (Mattingly 1967b). This hoard was somewhat smaller than the Worthing deposit; comprising 430 copies, one regular issue (of Claudius II) and two blank flans. The similarity of the barbarous radiates present to those recorded

in the previous hoard, together with its geographical proximity, made this an important find. The illustrations provided in Mattingly's report again obviate the necessity to provide a Plate here.

Mattingly identified die-linked groups within this hoard which he diagnosed as being of local mintage. He also found die-links with the Worthing and Calverton hoards. Once again, no links with early barbarous radiate hoards, such as those from Beachy Head, were found.

The general pattern of this hoard is very similar to that seen at Worthing. Imitations of Probus were recorded in the previous hoard. Two Goring coins possess mint marks copied from issues of either Tacitus or Probus (group 4, below). In general, the range of types present is comparable. Once again, the coins of most interest have been summarised in groups here, following Mattingly's sorting.

Group	Coin type	No. of Coins	Illustration (Mattingly 1967b)	Hoard Ref.
1.	Gallienus, <u>Neptuno Cons Aug</u>	1	-	1a
2.*	Obv. and rev. die-identical. Claudius II.	2	-	2
3.	Postumus copy.	1	-	6
4.	Mint-marked copies. Tacitus/Probus.	2	-	9
5.	Left-facing busts.	4	-	10
6.*	Obv. and rev. die-identical. <u>Invictus</u> .	19	Pl. 1, 1-3	11

7.*	Rev.die-identical. 3 diff. obverses.	8	-	12
8.*	Obv.and rev.die-identical. Male figure stg.right.	7	-	13
9.	Obv.and rev.die-identical. Male figure stg.right.	2	-	14
10.	Obv.die-identical with Worthing, group 8.	1	Mattingly 1964, Pl.xvii, 25-30	15
11.	Like a Worthing coin. Altar rev.	1	Mattingly 1964, Pl.xvii, 12	16i
12.	Obv.die-linked with Worthing group 9.	1	Mattingly 1964, Pl.xvii, 22-3	16if
13.	Obv.and rev.die-linked with Calverton coin. <u>Mars Victor.</u>	1	-	17
14.	Obv.in style of <u>Pax Aug</u> group. Obv.and rev.die-linked with Worthing coins.	2	-	18
15.*	<u>Pax Aug</u> group.	15	Mattingly 1964, Pl.xvi, 34-58	19
16.	Rev.like Calverton coin.	1	Mattingly 1963, Pl.ii, 16	20
17.	Like Calverton/Worthing group.	1	Mattingly 1963, Pl.iii, 10-13 Mattingly 1964, Pl.xvi, 27-30	21
18.*	Calverton/Lightwood group.	5	Mattingly 1963, Pl.ii, 5-15	22
19.*	Blank flans.	2	+	42

20.*	With portraits of Victorinus	8	-	8
21.*	<u>Invictus</u> copies.	21	-	25

* Once again, the groups shown with an asterisk have been closely studied. These coins are individually listed, within their groups, in the thesis catalogue.

The Goring hoard shows strong associations with the hoards of Calverton, Lightwood and Worthing. Those coin groups studied in detail here are plotted in figure 9:7. These coins can be seen to share a similar size/weight distribution to the Worthing coins. The Goring die-groups, shown in the top graph in figure 9:7, are of particular interest. Four such groups are plotted and three of these have distinct size/weight relationships. It is considered that this observation reflects their methods of manufacture, in batches, and not separate weight/size standards. Indeed, group 6 is highly variable. Their overall spread of values is similar to the spread of non-group coins, shown in the bottom graph, although some heavier group 6 examples are quite distinct.

The overall picture, as recorded at Worthing, is of failure to adhere to any close weight/size standard. The degree of variability observed with the single die-group 6 confirms this. This is a large group of nineteen coins, linked by both obverse and reverse dies. Flan shapes are almost all very irregular and vary between 10 mm and 15 mm diameter. Coin thicknesses range enormously, between 1.5 mm and 3.5 mm. Weights vary from just 0.55 g to 3.40 g, the latter being the heaviest coin recorded within the hoard. Die-axes are also completely variable.

A slightly higher proportion of the Goring coins are above

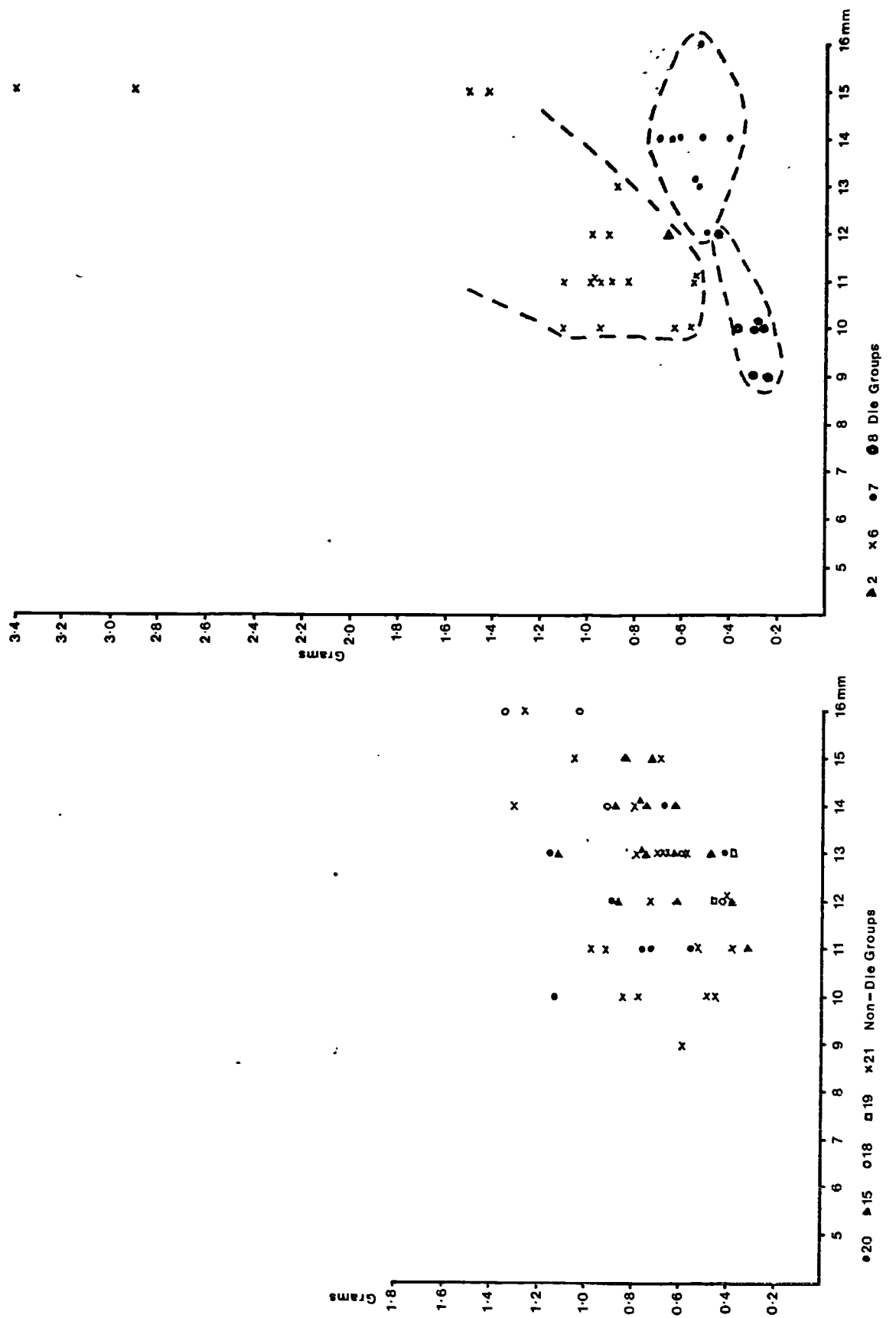


Fig.9:7 Goring hoard: diameters and weights

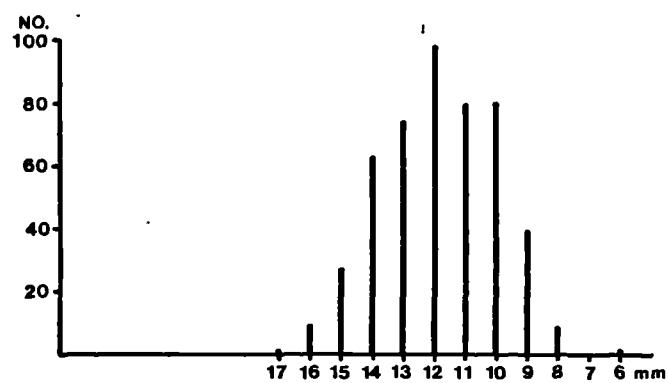
13 mm, although minims still account for 80% of the hoard. The physical appearance of these coins is comparable to that of the Worthing examples. Die- and style-associations have been noted. Sizes and weights are also very similar. The range of sizes at Goring is even tighter than that for Worthing, with just 9% falling outside the limits of 14 mm and 9 mm. The presence of two blanks and so many die-linked coins may suggest that this hoard had come directly from an irregular mint. It is doubtful whether blanks would have circulated alongside struck coins, even though a wide range of variation in the coinage was tolerated.

The Hove hoard

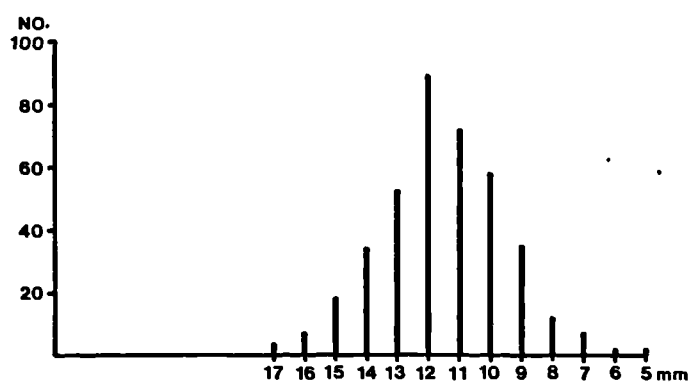
The hoard of 455 barbarous radiates discovered in 1938 at Hove, just seven miles east of Worthing, was published by the late Harold Mattingly (Mattingly 1939b). All of the coins were identified as irregular. A total of 388 of these coins have been studied, at Hove Museum. A comparison of the Worthing, Goring and Hove hoards has been made by Professor H.B. Mattingly, who concluded that, 'the general pattern of these hoards is virtually the same' (Mattingly 1967b, 56). Professor Mattingly was able to identify die- and style-links between Hove and Worthing, Goring and Calverton. Sixty-six of the Hove coins were illustrated in the published report. The more important coins present are documented below, once again following the original listing of Professor Mattingly.

Group	Coin type	No. of Coins	Illustration	Hoard Ref.
1.	Gallienus copies.	2	-	1
2.	Tacitus copy.	1	-	6
3.	Probus copies.	2	-	7

4.	Victorinus copies. One with mint mark from Tacitus/ Probus, Lugdunum?	8	-	8
5.	Rev.die-identical. 3 obverses.	6	-	11
6.	Obv.and rev.die-identical. <u>Invictus</u> .	3	-	12
7.	Obv.and rev.die-identical. Tetricus II.	2	-	13
8.	Obv.and rev.die-identical. <u>Icvi Stator</u> .	2	-	14
9.	Rev.die-identical.	2	-	15
10.	Obv.die-identical with Worthing group 18.	2	Mattingly 1964, Pl.xviii, 25	16
11.	Calverton/Worthing <u>Pax Aug</u> group.	5	-	17
12.	Calverton/Worthing <u>Pax Aug</u> variant.	2	-	17a
13.	Calverton group.	1	Mattingly 1964, Pl.xvi, 27-30	18
14.	Rev.like Calverton coins.	2	Mattingly 1963, Pl.ii, 16	19
15.	Obv.similar to Goring group 6.	1	-	20
16.	Empress on obv. Salonina/Severina.	1	-	22
17.	<u>Pax Augusti</u> in square frame.	1	Mattingly 1939, Pl.ii, 7	30



Goring-on-Sea Hoard



Hove Hoard

Fig.9:8 Coin diameters: Goring hoard and Hove hoard

This hoard is of similar size to the Goring hoard. It shows similarity of composition to Worthing and Goring, although it lacks any regular issues. All three hoards contain a similar range of types, from Gallienus and Claudius II, through to the Tetrici and Victorinus, with some types derived from Tacitus/Probus. The diameters of the Hove coins are recorded in figure 9:8. In this case, 84% are of 13 mm or less, while just 12% fall outside the limits of 14 mm and 9 mm.

All three of these hoards from the vicinity of Worthing must be regarded as contemporary from their metrology and composition. At least some of the coins from each originated from common mints, which H.B. Mattingly suggested were in the Midlands and in Sussex. If these three hoards were not buried by one person (as was suggested in the case of Beachy Head), they would have been buried at the same time in response to a common cause. Collectively, they show mints to have reached Sussex in quantity and give an indication of the quality and range of coins that was accepted during the later years of barbarous radiate circulation.

Sussex in conclusion

The study of barbarous radiates from Sussex has provided evidence of linking between sites in this county mainly with the Verulamium area. The sites studied did not have the more extensive lines of communication seen for sites considered in previous chapters, such as Silchester and Neatham (Hampshire). This could account for the more restricted contacts evidenced with other areas. The smaller Sussex assemblages have made such analysis more difficult. The continental links between Chichester and the Entrains hoard and between the Beachy Head and Allonnes II hoards reinforce the growing numbers of

contacts recorded from south coast locations.

Of the hoards studied, two main groups can be cited. These are the hoards of larger module, which include the Beachy Head deposits, and the hoards of smaller imitations, from the vicinity of Worthing. The groups are distinct in their oval composition and in the physical appearance of the coins present. There is no linking between the two groups, which clearly represent early and later phases of imitations. These reflect the distinct pools of coinage which circulated during the mid-270's and the late 270's/early 280's, in southern Britain.

Is it possible that the large minim hoards represent the output of a major local mint? H.B. Mattingly has speculated that the products of both Sussex and Midlands mints are present (see above). Certainly, the three hoards include coin struck from common sources. A number of external links from these hoards were identified by Mattingly, with the hoards of Calverton (Notts.) and Lightwood (Staffs.). However, the percentage of examples that can be linked outside Sussex is only very small; at about 2% of the imitations present. Approximately 7% of the imitations in the Sussex hoards link within and between them, as a group.

The problem remains that a mint need not be situated close to the location of such deposits. The source could have been almost anywhere in Britain. It is entirely possible that all of these coins were struck at a mint, or mints, far away from Sussex. Coins from the same source were buried in the Midlands hoards from Calverton and Lightwood. Unfortunately, no extensive die-linking between these hoards and sites yet studied, from any part of the country, have been found. Such

linking could eventually point to the likely area of production. Accordingly, it is not yet possible to locate the source with any certainty. What does seem clear is that the Sussex minim hoards represent the output of a major producer, or producers, whose coin was not merely restricted to a small part of the country.

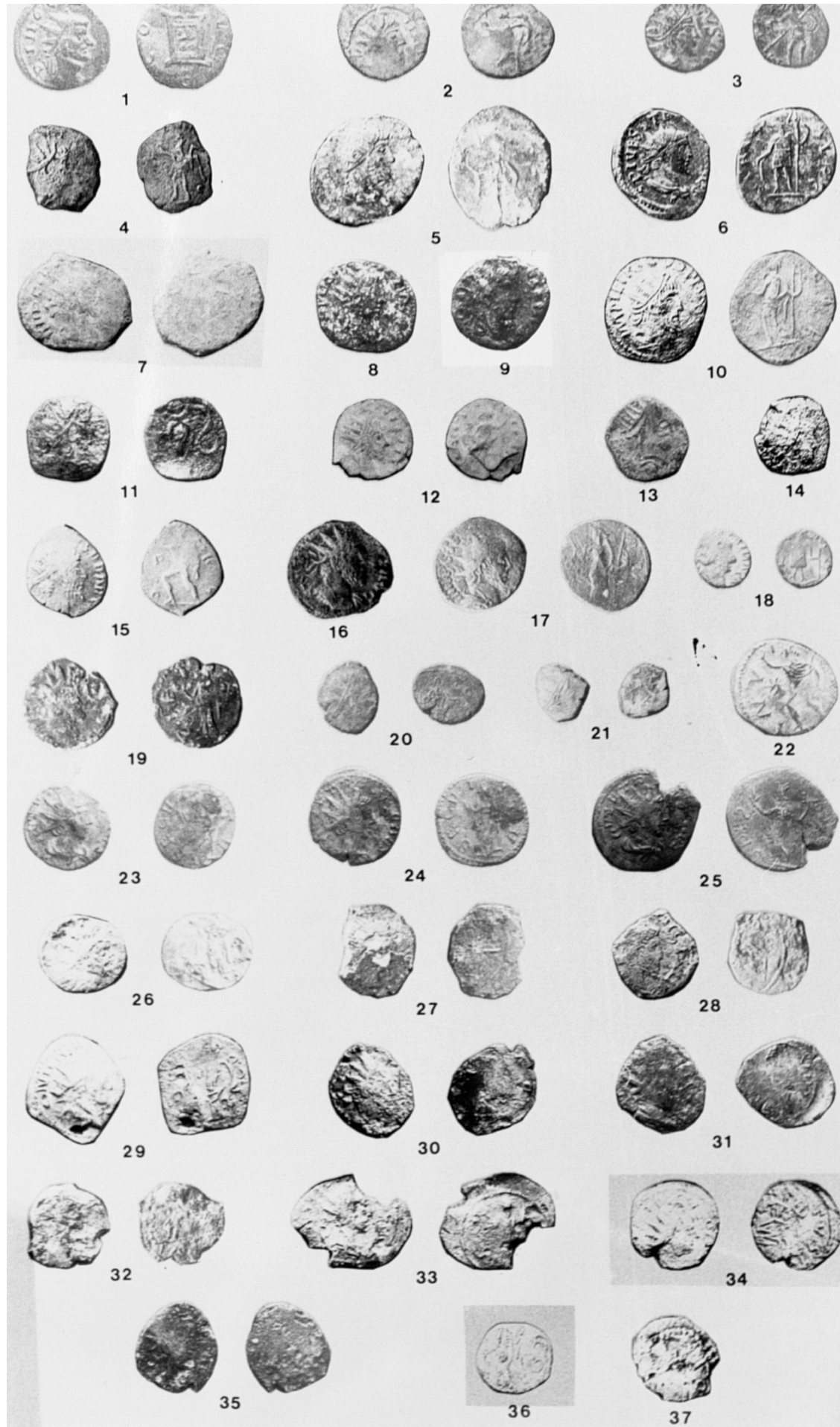


Plate 9:1 Sussex finds. Scale 1:1

Chapter 10. Kent, London, Surrey and Essex

In this chapter, barbarous radiates from the eastern counties of England will be studied. The coins come from three counties and from Greater London. The coverage of each of these four areas is much lighter than had originally been hoped, for a variety of reasons. However, a substantial volume of examples has been recorded; again coming from a variety of sites, from right across the region.

In the case of Kent, 3,005 barbarous radiates were studied from eleven sites. The civitas capital of Canterbury and the Saxon Shore fort of Richborough have provided the major assemblages. A number of smaller site collections from mid- and west-Kent were also made available to the writer. Unfortunately, it was not possible to obtain access to all collections. In the case of London, no single large assemblage of barbarous radiates from a site could be located. Despite the large amount of archaeological investigation in this area, coin recovery from the capital has been minimal. A disappointing total of just forty-nine site finds has been recorded. These are generally poorly preserved. The county of Surrey has been included in this chapter, from which just one site is represented. Once again, there was absence of collections for study. A comparative scarcity of Roman coin finds from this county generally has contributed to the situation, as reflected in the finds shown on the Ordnance Survey map of Roman Britain (fourth edition, 1978). It was originally intended to make London the northern boundary for this study. However, the subsequent availability for study of the large assemblage from recent excavations by the Colchester Archaeological Trust was considered to be a useful addition to

this thesis, somewhat compensating for the low coin numbers available in other parts of the south-east. These excavations added 355 examples and were supplemented by 974 from Colchester Museum, which were studied for comparison. Examples from two other small Essex sites have also been recorded.

The number of site finds considered in this chapter total 4,391, with the majority coming from three large collections. A number of barbarous radiate hoards from the south-east have also been made available for study and these serve to supplement the sample recorded from the region. Ten such hoards are known from Kent (see chapter 13) and three of these have been examined at first hand; the previously unpublished Allington hoard, an unpublished fourth century deposit from Canterbury and the large Hollingbourne hoard (Carson 1961). Two of the five recorded hoards from London have also been studied. These are from Lime Street (Merrifield 1955) and from Paternoster Row (Mattingly 1967a). The latter hoard is sometimes referred to as the Newgate Street hoard. Six hoards containing barbarous radiates have been listed from Essex (see chapter 13). The hoard from Witham, Ivy Chimneys, will be featured in this chapter.

Summary of the coins recorded

The numbers of the sites and hoards listed below correspond to the locations shown in figure 10:1.

Sites

Kent

- | | |
|-------------------------|----------------------|
| 1. Aylesford (1), | 2. Canterbury (967), |
| 3. Canterbury area (5), | 4. Farningham (6), |
| 5. Hartlip villa (3), | 6. Horton Kirby (1), |

7. Kits Coty (2),

8. Mount villa,

Maidstone (8),

9. Otford (1),

10. Richborough (2,010),

11. Springhead (1).

London

12. Greenwich Park (2),

13. Havering (1),

14. Leyton (1),

15. Londinium (45).

Surrey

16. Farley Heath (4).

Essex

17. Colchester (1,329),

18. Goose Lane (M11) (2),

19. Woolston Hall Farm (2).

Hoard

The size of the hoard is shown in brackets, followed by the number of barbarous radiates present.

Kent

20. Allington	(22)	17
---------------	------	----

21. Hollingbourne	(5,357)	359
-------------------	---------	-----

22. Canterbury, Marlowe III	(172)	2
-----------------------------	-------	---

London

23. Lime Street	(32)	32
-----------------	------	----

24. Paternoster Row	(542)	527
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Essex

25. Witham, Ivy Chimneys	(329)	329
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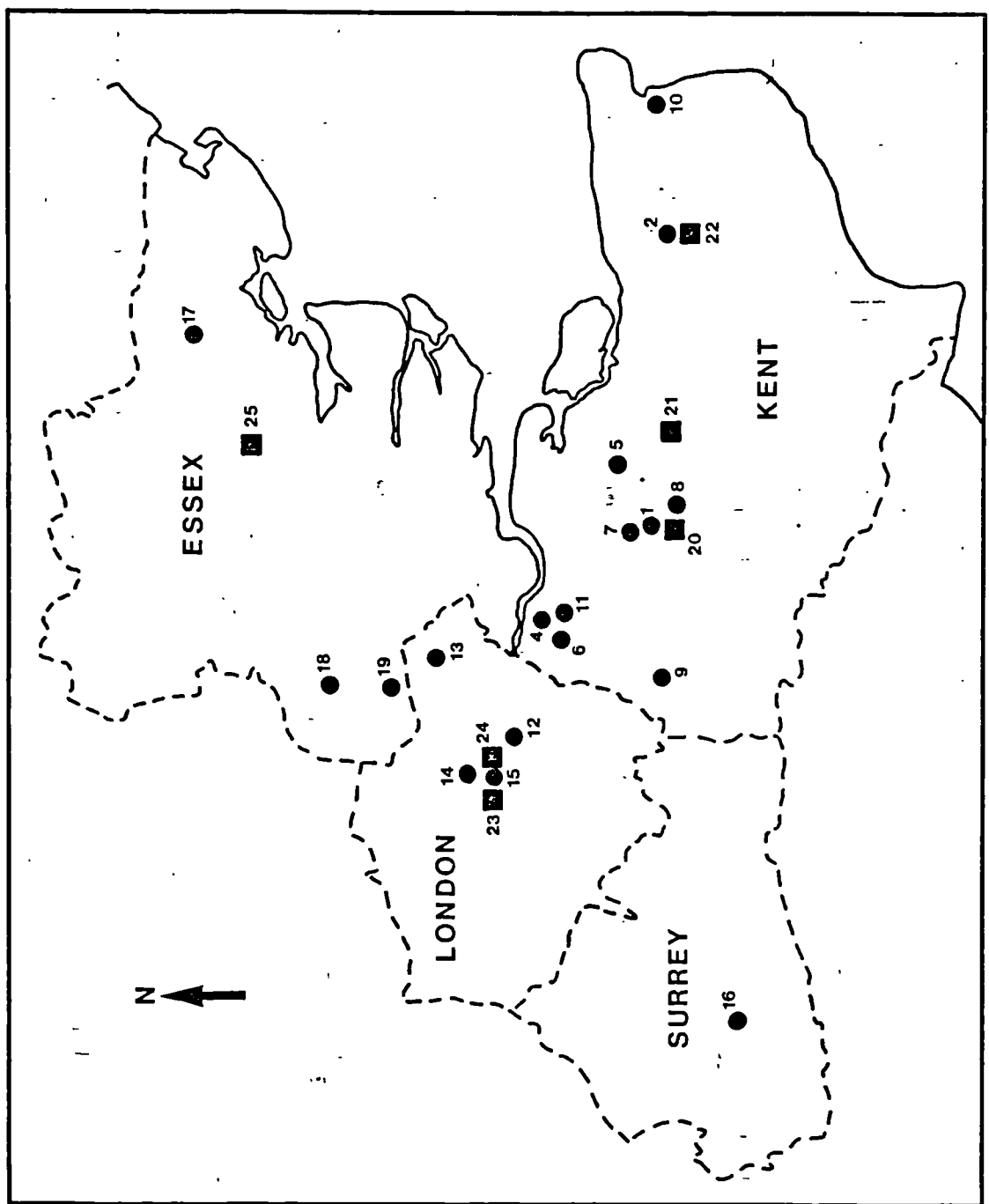


Fig.10:1 Map of sites and hoards in Kent, London, Surrey and Essex. Scale 1:1,000,000

Kent

The barbarous radiate site finds studied from Kent come from ten sites, of highly variable size. Canterbury and Richborough have provided two large assemblages. They have been complemented by small collections from the Darent valley, Maidstone and the Canterbury area. Three hoards, from Hollingbourne, Marlowe III (Canterbury) and Allington have been examined at first hand and further examples have been available for study in the publication of the Richborough (1931) hoard (Mattingly and Stebbing 1938). In total, some 4,000 barbarous radiates from Kent have been viewed. The first site to be considered will be the civitas capital, Canterbury.

Canterbury (TR 1557)

Roman Canterbury (Durovernum Cantiacorum) was situated in a key position in relation to both road and sea routes (Detsicas 1983, 39). Roads radiated from the town across east Kent and Watling Street ran westwards, to Rochester and London. Access to the sea was provided by the River Stour. Thus the communications can be seen to have been extensive. The barbarous radiates recorded from Canterbury come from three sources. The largest collection, of 542 examples, comes from the excavations of the Canterbury Archaeological Trust. The second collection, of 401 examples, comes from the excavations of Professor Frere, carried out in the immediate post-World War Two period. The Canterbury Museum was able to provide an additional twenty-four examples from the city for study.

The types present

The barbarous radiate types from Canterbury are listed in figure 10:2. The coins from the Trust's excavations have been

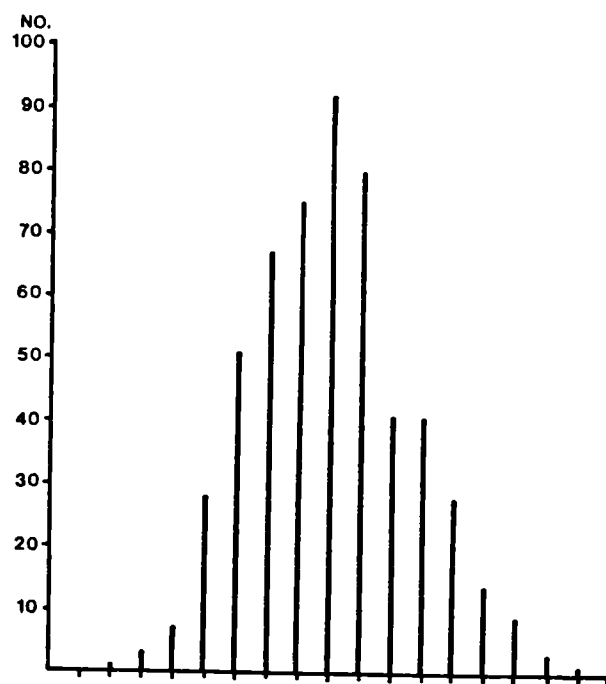
combined with the small total of Museum coins in the first column and those from Frere's excavations are shown separately. The combined total for the site is also shown, in a separate column. The relative percentages of types present will not be laboured here. The usual types predominate; Pax Aug, Spes, Pietas and Salus for the Tetrici, Invictus for Victorinus and under the Central Empire Divo Claudio copies are most common.

The diameters of the Canterbury barbarous radiates have been shown in figure 10:3, with separate graphs for the Archaeological Trust/Museum coins and the Frere coins. The diameters range from 23 mm to 7 mm. Both graphs exhibit a single peak, at 15 mm/14 mm. There is no second peak at about 12 mm, as was the case on west country sites (see chapter 6). Both graphs form a bell-shape. The main difference between the two graphs is in the proportion of larger module coins, above 15 mm, with a smaller proportion present within the latter collection.

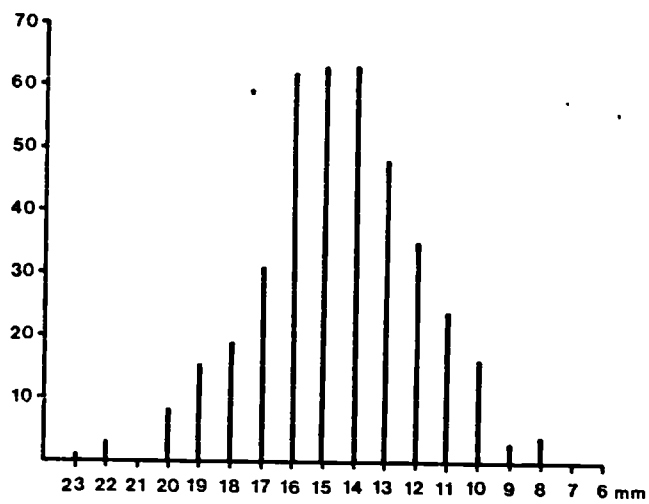
The coins of particular interest have been illustrated in Plate 10:1 and will be described individually. The Central Empire category provides some of the more interesting and important varieties recovered. Number 1 is a copy of Gallienus, as betrayed by remnants of an obverse legend and the reverse type. It shows a very stiff, indeterminate animal, probably derived from the Dianae Cons Aug series. Number 2 is another minim, imitating a coin of the emperor Quintillus. The square jaw and forehead are covered in dotted beard and hair, as frequently used on the coinage of that emperor. Number 3 is a copy of Probus. The letters PROBV- are clearly visible on the obverse face of the coin. Two further Gallienus copies are shown. Number 39 is a crude but distinctive example, with

CENTRAL EMPIRE	<u>TRUST/MUS.</u>		<u>FRERE</u>		<u>TOTAL</u>	
	NO.	%	NO.	%	NO.	%
Gallienus	4	0.7	4	1.0	8	0.8
Claudius II	4	0.7	4	1.0	8	0.8
Divo Claudio - altar	15	2.7	16	4.0	31	3.2
- eagle	8	1.4	15	3.7	23	2.4
- illeg.	-		1		1	
Quintillus	1		-		1	
Probus	<u>1</u>		<u>-</u>		<u>-</u>	
TOTAL CENT. EMP.	33	5.8	40	10.0	73	7.5
GALLIC EMPIRE						
Postumus	1		3		4	
Victorinus						
- Invictus	23	4.1	13	3.2	36	3.7
- Pax Aug	8		3		11	
- Other	<u>27</u>		<u>6</u>		<u>33</u>	
Total Victorinus	58	10.2	22	5.5	80	8.3
Tetricus I and II						
- Fides Militum	11	1.9	4	1.0	15	1.6
- Hilaritas Augg	10	1.8	6	1.5	16	1.7
- Laetitia	9	1.6	6	1.5	15	1.6
- Mars Victor	3	0.5	2	0.5	5	0.5
- Pax Aug	85	15.0	45	11.2	130	13.4
- Pietas	12	2.1	19	4.7	31	3.2
- Salus Augg	31	5.5	13	3.2	44	4.6
- Spes	44	7.8	33	8.2	77	8.0
- Victoria/Comes Aug	11	1.9	4	1.0	15	1.6
- Virtus Augg	10	1.8	6	1.5	16	1.7
Tet. I, uncertain rev.	42	7.4	25	6.2	67	6.9
Tet. II, uncertain rev.	<u>4</u>	0.7	<u>23</u>	5.7	<u>27</u>	2.8
Total Tetrici	272	48.1	186	46.4	458	47.4
Other types	<u>36</u>		<u>-</u>		<u>36</u>	
TOTAL GALLIC EMP.	331	58.5	211	52.6	542	56.0
Uncertain minimi	72		77		149	
Unclassifiable	<u>94</u>		<u>73</u>		<u>167</u>	
GRAND TOTAL	566		401		967	
Total minimi	141	24.9	128	31.9	269	27.8

Fig.10:2 Summary of types from Canterbury



Canterbury Arch. Trust



Canterbury - Frere

Fig.10:3 Coin diameters: Canterbury

dotted beard. Number 40 is very worn but an animal can be identified on the reverse, which is possibly a doe, walking left.

Two large module imitations of Postumus are illustrated. Number 37 is a copy of Pax Aug, of Cologne, with V in the field, left. Number 38 shows the Oriens Aug reverse type.

Die- and style-linking

One important die- and style-group of imitations which was recognised by H.B. Mattingly was characterised by a square-shaped head on the obverse and the figure of Spes on the reverse (Mattingly 1967a). Examples were noted in the Hollingbourne hoard, the Newgate Street hoard and from Verulamium. This group was described in chapter 4 as group N (see also figure 4:1). No additional examples have yet been noted from the current study. One coin from Canterbury resembles this group. The coin, illustrated in Plate 10:1, 7, is not as stylistically close as other members of the group but it does resemble the overall type on both obverse, reverse and in size. The reverse figure of Spes has been reversed and this coin may be a subsequent copy from the main group.

Plate 10:1, 13 is a simple copy of Tetricus II, with prominent, rounded, jaw. A similar coin has been recorded at Richborough (Davies 1982b, Pl.2, 31) and in the Newgate Street hoard (this chapter). Four examples of the ubiquitous Invictus/ewer group have been identified (Plate 10:1, 14-16 and 36). Number 14 is Invictus, 16 and 36 depict the 'ewer' and 15 has an indeterminate reverse. The existence of different sub-styles within the overall group have been suggested in previous chapters and will be discussed further in chapter 12. Number 14 most closely resembles the variety found at Winchester

(Plate 7:2, 8). Number 15 is a better-engraved variety and more similar to examples recorded from Frilford, Oxfordshire (Plate 8:3, 31), and from Richborough (Davies 1982b, Pl.2, 14). The obverse of number 16 is poorly preserved but the reverse ewer is similar to examples from Verulamium (Plate 8:3, 30).

Three coins from Chichester were described in chapter 9 which have simple reverse engravings of a female figure, left, and a legend comprising the letters C and O (Chichester catalogue numbers 41, 42 and 46). Two Canterbury coins share the same traits and although they are not obviously stylistically similar, they may originate from a common mint (Plate 10:1, 17-18). Plate 10:1, 19 carries an obverse Tetrican portrait, which has been modified with an angled forehead and nose. Similar coins were recorded at Verulamium and examples were illustrated in Plate 8.4, 11-17.

Two coins shown in Plate 10:1, 34-5, are stylistically similar to a group of seven coins from Silchester (Plate 7:4, 16-22). It is considered that further examples show stylistic similarity with Richborough coins. They carry little detail and such an observation is difficult to substantiate at present. It can be seen, overall, that the external associations described have a restricted distribution pattern within the south-east. Silchester, Chichester and possibly Winchester appear to be the western extremes and the Invictus/ewer group examples present seem to belong to sub-groups from the east.

No internal die-linking has been identified at Canterbury. As in the case of other larger collections, it has been possible to define groups based on the use of unusual characteristics unique to the site. Such a group is

illustrated in Plate 10:1, 26-8 and 33. These four coins have similar sized flans and carry a blurred reverse engraving of a large ewer, from the Pietas Augg reverse of Tetricus II. The depiction of the ewer in isolation, to the omission of the subsidiary sacrificial implements, is seldom found on copies of such large size. The jug in each case is not identical but the same free approach has been employed. It has a rounded centre which rests on a pedestal and a small rounded handle. Nothing like these has been seen elsewhere and it is considered likely that these are local imitations; not necessarily by the same hand but within a distinct local tradition. A second unusual 'group' of coins is shown in Plate 10:1, 20-4. Their portraiture is not linked by similar features but all are similar-sized copies of the same general crudeness. All do have a prominent, slightly hooked, nose. Copies resembling this general execution have not been recorded at other sites. A third 'group' comprises the illustrated coins 8, 9 and 25, all of which carry angular features, high relief and large lettering, on a large flan. Two other coins (Plate 10:1, 11 and 12) possess similar portraits, characterised by a long forehead, absence of beard but lack of similarity to Tetricus II, which they purport to copy.

Style groups among minims are very difficult to identify among site finds. Numbers 29-32 in Plate 10:1 exhibit obverse engravings similar to the V-shaped features of the Invictus/ewer group. They display very little detail beyond the basic portrait. These may be local derivatives of the main group. Two other minims show a similarity of engraving style. Numbers 5 and 6 are both Salus Augg copies of minim size. Both have no legend, show the figure reversed (with the snake to the right, formed from just the letter S) and erroneously have a

male figure.

The final link to be described associates Canterbury with Gaul. The coin shown in Plate 10:1, 42 shares an obverse die with another from the La Vineuse hoard from central France (Saone et Loire) (see Le Gentilhomme 1942, Plate 7, 26). This die-link will be considered with other continental links in chapter 11, below.

Conclusion

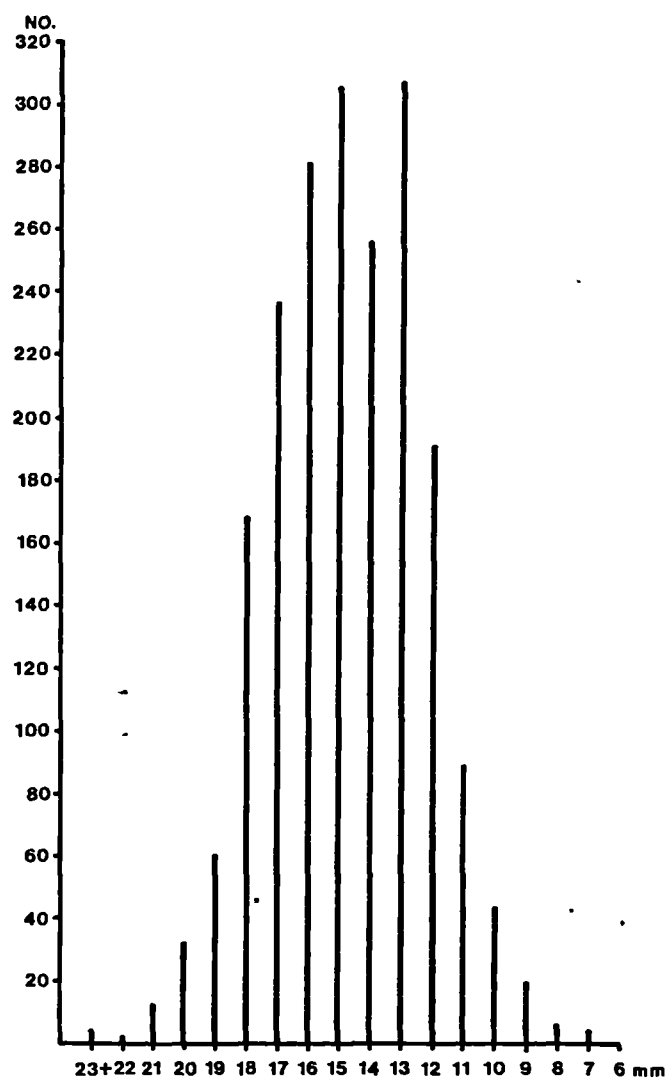
The combined assemblages from excavations at Canterbury comprise a very appreciable sample of the irregular coinage which circulated at the site. However, once again, linking both within the collection and with other sites was found to be minimal, involving just some 4% of the coins studied. As in the case of previous sites, it is considered that small groups of coins with common features represent some local production. The percentages of minims recovered from both of the major excavations involved are quite high, at 24.9% and 31.9%, but both are smaller than those recorded for many of the sites further west, including Cirencester, Mildenhall, Wanborough, Colliton Park and Neatham. The good communications enjoyed by this site would have served to ensure a vigorous circulation of this coinage. The links identified in the above section would point to an area of contact restricted to the south-east of the country, perhaps as far as Hampshire in the west, but also extending into Gaul. Such a conclusion is not surprising, given the key location of this civitas capital within the province, but it does serve to increase the validity of interpreting style-links when such acceptable deductions are the result. These conclusions will now be compared with those from another important Kent site, at Richborough.

Richborough (TR 3060)

The Roman site of Richborough (Rutupiae), which saw a transition from supply base to port, settlement, defended look-out post and to Saxon Shore fort, has produced very high numbers of Roman coins. Excavations in the 1920's and 1930's recovered the astonishing total of 56,000 coins, which have now been published in summary form (Reece, 1981c). In the late third century the site was in military ownership, comprising a fort some 300 ft square and enclosed by three ditches and a rampart. The earthen fort is thought to have been dismantled and replaced by a larger stone fort under Carausius (AD 286-93) (Cunliffe 1968, 245).

The barbarous radiates from Richborough have already been the subject of a separate study by the writer (Davies 1982b). That report was produced in advance of the thesis in order to provide an introduction to the work in progress and to obtain reaction to the method of presentation and analysis of site assemblages, as used here. An offprint of that paper is enclosed with this thesis and it is not intended to duplicate the detailed study of the Richborough imitations presented in it. However, a summary of the main findings will be provided, in order to facilitate a comparative analysis of the results. Additional aspects not covered in the publication will also be considered here. A full catalogue of the Richborough coins, including weights, is provided at the end of the thesis, which was not included in the publication. The more important coins studied were illustrated in two plates within the paper and, once again, they will not be duplicated here.

A total of 2,010 barbarous radiates were identified from the Richborough coin collection. They comprise the largest assemblage from a single site encountered in the present



Richborough

Fig.10:4 Coin diameters: Richborough

CENTRAL EMPIRE	NO.	%
Gallienus	10	0.5
Claudius II	28	1.4
Divo Claudio - altar	8	0.4
- eagle	14	0.7
- illeg.	3	0.1
Aurelian	<u>3</u>	0.1
TOTAL CENT. EMP.	66	3.3
GALLIC EMPIRE		
Postumus	4	0.2
Victorinus		
- Invictus	43	2.1
- Pax Aug	18	
- Other	<u>46</u>	
Total Victorinus	107	5.3
Tetricus I and II		
- Fides Militum	16	0.8
- Hilaritas Augg	28	1.4
- Laetitia	31	1.5
- Mars Victor	1	
- Pax Aug	304	15.1
- Pietas	51	2.5
- Salus Augg	98	4.9
- Spes	186	9.3
- Victoria/Comes Aug	18	0.9
- Virtus Augg	40	2.0
Tet. I, uncertain rev.	123	
Tet. II, uncertain rev.	<u>69</u>	
Total Tetrici	965	48.0
Other types	338	
TOTAL GALLIC EMP.	1414	70.3
Uncertain minimi	241	
Unclassifiable	<u>289</u>	
GRAND TOTAL	2010	
Total minimi	697	34.7

Fig.10:5 Summary of types from Richborough

survey. A slightly revised breakdown of types present is provided in figure 10:5; in which more of the Gallic Empire copies have been allocated to Victorinus than in the published summary. Since the original study, many other site collections have been seen. Such comparison has led to a suspicion that the Central Empire Divo Claudio category is under-represented in the figures for this site. It is considered likely that a renewed assault upon the trays of official Central Empire coins would reveal more irregular examples, within this particularly problematic series. It is noted here that the original sorting of the Richborough barbarous radiates was mainly done by other workers, prior to this programme of study.

Some very unusual types are present within the Richborough collection and they are described in the separate paper. However, the two examples which carry the reverse type of a seated female figure, derived from the coinage of Aurelian, deserve particular mention, as this type has not been recorded elsewhere in Britain (Davies 1982b, Pl.1, 11-12). Two die-links are also present, which carry a very strange reverse engraving of a 'pin figure' who wears a dotted halo (op.cit., Pl.1, 20-1).

The diameters of the Richborough barbarous radiates are shown in figure 10:4. The shape of the graph, as at Canterbury, is closer to a 'bell' than to the dual-peak graphs obtained for the west country sites (chapter 6), although there is a dip in the graph at 14 mm. The percentage of minims is higher than at Canterbury, at 34.7%. However, if the Divo Claudio copies (which tend towards larger module) are under-represented as suspected, this percentage would come down.

A number of internal die- and style-groups were identified, which include the two die-links cited above. A local irregular

mint at Richborough had been speculated on the evidence of die-linking within the 1931 Richborough hoard (Mattingly and Stebbing 1938). One site find was found to die-link with another from that hoard and four others from the site exhibit a closeness of style with hoard coins. The association of the hoard with site finds and the instances of internal linking may reflect some local manufacture but the proportion of coins in question is very small. Only about three percent of identifiable site finds have been suggested to link internally, to any extent.

A number of die- and style-links were recorded with other sites and hoards in the south of England. They include the following coins:-

	<u>Illustration in</u> <u>Davies 1982b</u>
Eight members of the <u>Pax Aug</u> group (Chapter 4, group A)	Pl.1, 22-7
Five members of the <u>Invictus</u> /ewer group (Chapter 4, group B)	Pl.2, 12-16
Two derivatives of the previous group (<u>Invictus</u> type)	Pl.2, 10-11
Obverse and reverse die-link with Silchester, Hants.	Pl.1, 19
One member of the large flan <u>Spes</u> group (Chapter 4, group N)	Pl.1, 18
Other links with coins from southern England embrace Verulamium and Gorhambury (Herts), Woodeaton (Oxon), Cirencester (Glos), Mildenhall (Wilts), Canterbury and the hoards from Goring (Sussex) and Mildenhall (Suffolk). No main axis of contact could be detected.	

The overall number of die- and style-links identified at Richborough accounts for approximately just five percent of legible examples. However, no other site has produced a higher percentage of links. A map summarising the external links from Richborough is provided in figure 10:12.

Conclusion

A very large sample of barbarous radiates has been obtained from the intensive excavation programme at Richborough during the 1920's and 1930's. Even with such a large collection from this single site the variety of engraving styles seen has continued to increase proportionately to the greater number of coins recovered. Greater coin numbers have not produced a nucleus of die-links representing the output of local mints, as may reasonably have been expected. If a mint existed at this site, as suggested by Mattingly and Stebbing (1938) it was not supplying the sole needs of the site by any means.

The barbarous radiate assemblage from Richborough is very mixed and shows contacts from the site to locations right across the part of southern England studied for this thesis. This is more extensive than the pattern recorded at Canterbury, which was thought to have a more restricted, eastern sphere of contact. The very wide contacts from Richborough are perhaps surprising for a military site. In the later third century the site is not thought to have had the widespread trading connections which it enjoyed, as a port, during the first century. The contrast between the findings from Canterbury and Richborough may in fact reflect the contrasting civilian and military site functions, with the more widespread movement of coin seen at the latter associated with military communications.

Other Kent sites

Barbarous radiates from eight other Kent sites have been studied, which total just twenty-four coins. Not surprisingly, no internal or external die-links have been found among this small body of coins. All have been listed in the catalogue.

Eight of the coins come from the Mount villa at Maidstone, four of which are of minim size and one measures just 9 mm. Three others come from Hartlip villa, one of which is a copy of Tetricus II's Pietas, with an incuse reverse (catalogue number 3). Five otherwise unprovenanced examples have been recorded as coming from the 'Canterbury area'.

Barbarous radiate hoards from Kent

Three barbarous radiate hoards from Kent have been studied. Those from Allington and Marlowe III (Canterbury) contain modest numbers of imitations, while Hollingbourne is of some considerable size. The smaller hoards will be considered first.

The Allington hoard

The Allington hoard was discovered near Allington Castle, on the River Medway, near Maidstone. Other than a brief reference in the Victoria County History (Kent, iii, 1932, 144), there had been no previous documentation of the hoard. This writer prepared a short report on the deposit for publication, following the study of barbarous radiates at Maidstone Museum and the offprint is included with this thesis, for reference (Davies 1982a). That report was compiled at the very outset of the current study. A summary of the findings will be outlined below.

The Allington hoard contains five regular antoniniani, which

date from AD 268-76, and seventeen barbarous radiates. They were discovered in a 'bulbous beaker' which is a possible product of the lower Thames BB2/grey ware industries (Pollard 1982). All of the irregular coins were copies of Gallic Empire types. Several are good, accurate, copies, although others are more stylised. A Plate showing all irregular coins is included within the published report.

It was concluded that some of the coins possess stylistic similarity with examples from the Hollingbourne hoard (see below). In addition, one minim, which depicts a stylised 'pin figure' on the reverse, compares closely with an example from Silchester (op.cit., Pl.1, 17-18). Two internal groups of five and three coins, were diagnosed, based on die-axis alignments, style and size.

The Allington imitations show some degree of die-axis alignment, which complements the findings from sites, as discussed in chapter 6. Of the six copies of Tetricus I which are well-enough preserved to show an alignment, four are at 0 and one at 180 degrees. These include the most accurate copies. A common origin was suggested in the cases of coins within each of the two groupings.

The Allington hoard contains worn coins which had been withdrawn from everyday circulation. The presence of five minims shows irregular antoniniani of varying size and quality to have circulated together, alongside official issues, within the same circulatory pool. The hoard was dated to approximately AD 280.

The Marlowe III, Canterbury, hoard

A hoard of 172 Roman coins, dating mainly to the mid-fourth century, was discovered during excavations by the Canterbury Archaeological Trust. The coins were inspected personally and, as yet, remain unpublished. Just six of the coins date from the third century and two of these are barbarous radiates. Both are unremarkable types. This example serves to illustrate that small numbers of radiate coins could find their way into hoards of mid-fourth century date. Such cases are known elsewhere (Burnett 1979, 92). It does appear that these coins, in small numbers, did enjoy some circulation alongside baser issues of the fourth century, which they resemble in size, quality and in appearance at a cursory glance.

The Hollingbourne hoard

This large hoard of 5,357 Roman coins was discovered at Hollingbourne, five miles east of Maidstone, at the Old Mill Farm. The coins were found in a ceramic vessel. Just two were denarii and the rest were antoniniani, including both regular and irregular types. The 4,997 regular issues present spanned the years from Elagabalus to Probus. The hoard has been published and the report concentrated on the regular component (Carson 1961). However, the 359 listed barbarous radiates represent a substantial component and deserve some consideration here. They have been personally inspected and closely compared with all other assemblages studied.

In contrast to the small hoard of radiates from Allington, which contained a selection of worn coins withdrawn from circulation, the Hollingbourne imitations are better copies, of large module, much more closely comparable to the large number of regular issues which they supplement. Where Allington was a

'currency' hoard, Hollingbourne represents a store of wealth. A summary of the types present, based on an original listing prepared by Professor H.B. Mattingly, at Maidstone Museum, is presented in figure 10:6.

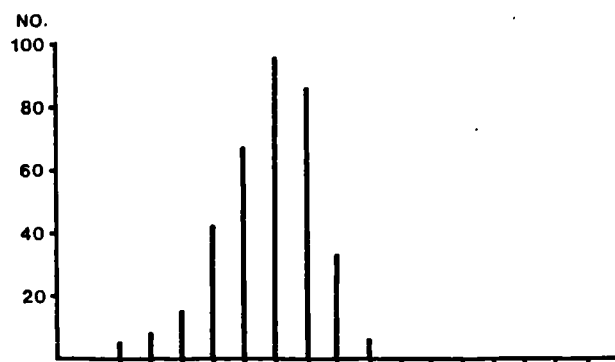
The breakdown of types present shows all of the types found regularly on sites to be present. The main Gallic Empire types of Pax Aug., Salus Augg. and Spes again predominate. However, Central Empire types are rare. Some less-common types are illustrated in Plate 10:2. Numbers 1 and 2 are Gallienus copies. Number 3 is Marius and both copies of Postumus present are shown as numbers 5 and 6.

Less than forty of the imitations diverge from a well-rounded flan. It is rare to find an appreciable proportion of any collection employing regular-shaped flans. The coin diameters are shown in figure 10:7. Some 82% fall within the size range from 19 mm to 16 mm, inclusive, with none falling below 14 mm. Over 90% have good, accurate, engravings. A total of 304 have accurate obverse legends and 292 have accurate reverse legends. This assemblage, as a whole, comprises good accurate copies which do not diverge greatly in appearance from their regular counterparts.

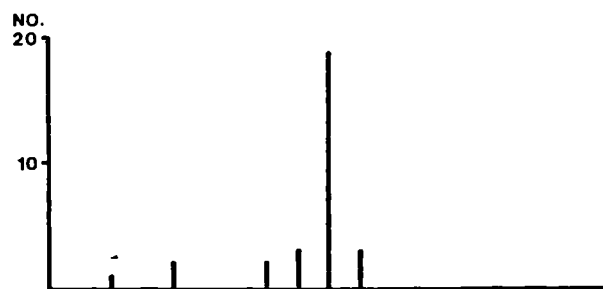
Some important external links are present within the Hollingbourne hoard. H.B. Mattingly has already noted the presence of a member of the square head/Spes group (chapter 4, group N) (Mattingly 1967a). This coin is illustrated in Plate 10:2, 19. An additional link, not previously known, involves the coin shown in Plate 10:2, 4. This coin die-links, on both obverse and reverse, with another from the La Vineuse hoard from central Gaul (Le Gentilhomme 1942, Pl. III, 21). Two other coins are illustrated which are considered to stylistically

CENTRAL EMPIRE	NO.	%
Gallienus	2	0.5
Claudius II	5	1.4
Divo Claudio	1	0.3
Quintillus	1	0.3
TOTAL CENT. EMP.	9	2.5
Postumus	2	0.5
Marius	1	0.3
Victorinus	17	4.7
Tetricus I and II		
- Fides Militum	4	1.1
- Hilaritas Augg	32	8.8
- Laetitia	10	2.7
- Mars Victor	3	0.8
- Pax Aug	86	23.6
- Pietas	13	3.6
- Salus Augg	51	13.9
- Spes	52	14.2
- Victoria/Comes Aug	9	2.5
- Virtus Augg	25	6.8
Tet. I & II, uncertain rev.	40	10.9
Total Tetrici	325	89.0
Other types	10	2.7
TOTAL GALLIC EMP.	355	97.3
GRAND TOTAL	365	
Total minimi	0	
<u>Note</u> 365 barbarous radiates have been listed and not the published total of 359.		

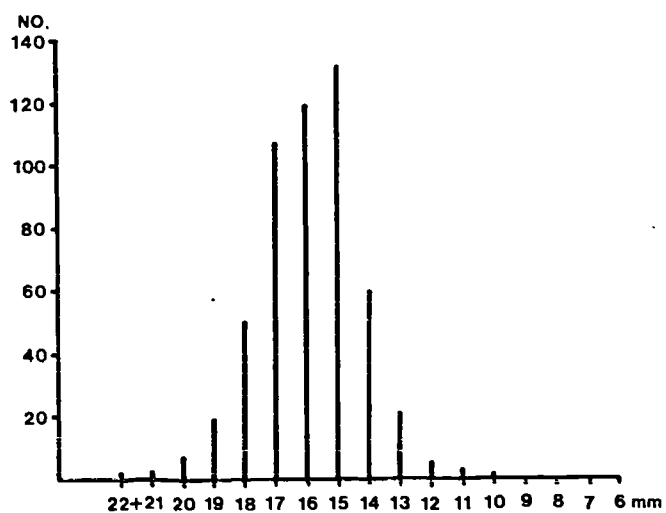
Fig.10:6 Summary of types in the Hollingbourne hoard



Hollingbourne hoard



Lime Street hoard



Newgate Street hoard

Fig.10:7 Coin diameters: the Hollingbourne, Lime Street and Newgate Street hoards

resemble other English site finds. Plate 10:2, 7 and 8 are cruder copies, out of keeping with the general high standard of imitations present. These poor copies have irregular flans and simple engravings. Similar engravings were recorded at Silchester (Plate 7:1, 34) and at Verulamium (Plate 8:4.32).

Some of the Hollingbourne imitations exhibit close stylistic similarity. It is difficult to describe a style when engravings closely resemble the original issues but it is likely that a large proportion of the copies originated from a common irregular mint. Five obverses are illustrated in Plate 10:2 which exhibit very similar treatment. They are characterised by linear engravings, low relief and tight detail. Numbers 14 and 15 are slightly more detailed than numbers 16-18.

The barbarous radiates from the Hollingbourne hoard are not typical of a cross-section of site finds from Britain. Their quality and size range suggests that they are early copies, of the early 270's, and the association with the La Vineuse hoard may indicate that these were products of a continental mint, struck prior to the main episode of copying in Britain.

Kent - a summary

The emphasis of the survey of barbarous radiates from Kent has been intensive study of two large site assemblages, of contrasting civilian and military origin. In both cases the large samples studied represent an impressive collection of coins that had been used at the sites. However, instances of die-linking did not increase in proportion to the higher number of coins available. The range and relative proportion of coin types recorded from Kent sites and hoards is consistent with that recorded for previous counties. Minims do not appear to have been quite as numerous as at sites in the far west of Britain.

Evidence from die- and style-linking suggests that Richborough had communications with a wide area across the south of England, unlike the civil site of Canterbury, where extensive linking was not recorded. Further examples of H.B. Mattingly's Invictus/ewer and Pax Aug groups have been found, as well as examples of his square head/Spes group. The latter group appears to have been restricted to the eastern counties, unlike the previous two groups cited.

Coins from contrasting hoards have been documented. Large numbers of early, close, copies were recorded from Hollingbourne and a more representative sample of coins from everyday coin use was recorded from Allington.

London

A total of forty-nine barbarous radiates have been recorded from Greater London. Of these, forty-five were studied at the Museum of London and come from the Roman town of London (Londinium). They all came from the old Guildhall Museum collection. These coins were all cleaned and conserved prior

to study but almost all of them are highly corroded. A summary of their types is provided in figure 10:8. They do not represent a collection from a single excavation but come from findspots across the city, as recorded in the catalogue.

Despite the fact that the barbarous radiates come from varied provenances within the Roman town, they exhibit a fairly typical spread of types, as may be seen on individual English sites. There may be a slightly high percentage of Central Empire types. One Invictus/ewer group coin, with the latter reverse form, was present (Plate 10:2, 20). Another unusual flan was present which had been labelled as a 'cast blank for the preparation of a minim' (Plate 10:2, 21). No further details about this coin were available. Four of the better-preserved coins from London have been illustrated in Plate 10:2. Numbers 22 and 23 are imitations of Victorinus and have been classified as Fortuna and Providentia, respectively. Three others are based on Tetrican types. Number 24 is Pax Aug. The reverse legend contains reversed lettering and a very prominent dotted border. Number 25 is a copy of Spes and number 26 is Virtus Aug. The barbarous radiates recorded from Roman London represent an assortment of engraving styles.

Of the four other coins recorded from Greater London, two come from excavations in Greenwich Park by Webster, Jones and Tugwell, in 1901-2 and the others come from excavations by staff of the Passmore Edwards Museum.

Additional coins from London have been sought for comparison but no other collections of appreciable size could be traced. In the mid-nineteenth century, Roach Smith noted over 2,000 Roman coins from London, which were mainly recovered from the bed of the River Thames (Roach Smith 1859, 150). These came

CENTRAL EMPIRE	NO.	%
Gallienus	1	
Claudius II	1	
Divo Claudio - altar		
- eagle	1	
TOTAL CENT. EMP.	9	20.0
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus		
- Pax Aug	1	
- Other	<u>5</u>	
Total Victorinus	6	13.3
Tetricus I and II		
- Fides Militum	1	
- Hilaritas Augg		
- Laetitia		
- Mars Victor		
- Pax Aug	6	13.3
- Pietas	1	
- Salus Augg		
- Spes	3	6.7
- Victoria/Comes Aug		
- Virtus Augg	1	
Tet. I, uncertain rev.		
Tet. II, uncertain rev.		
Total Tetrici	12	26.7
Other types		
TOTAL GALLIC EMP.	18	40.0
Uncertain minimi	10	
Unclassifiable	8	
GRAND TOTAL	45	
Total minimi	13	28.9

Fig.10:8 Summary of types from London

from the Thames gravel during the course of repairs to the river bank in the vicinity of old London Bridge. In his list, Roach Smith refers to 200 minimi but does not separate radiate from fourth century diademed types. Twenty 'various badly struck' coins of the Tetrici may also be irregulars.

Jenny Hall has listed just a single barbarous radiate among the thirty-three coins removed from New Fresh Wharf, although there are only two coins dating after AD 222 from the site (Hall, pers.comm. and 1986, 234). In his coin report for the Southwark excavations, Hammerson listed six barbarous radiates and eleven 'uncertain 3rd/4th century minims' (Hammerson 1978, 587-600).

It appears that only small numbers of barbarous radiates from the city survive, in a number of collections, and they are in a generally poorly preserved state. Two important hoards containing barbarous radiates, from the Roman town, are housed at the Museum of London and these have been examined in detail in order to supplement the disappointing number of site finds available. The first of these is the hoard from Lime Street.

The Lime Street hoard

This hoard of thirty-two coins was discovered in 1952 at Lime Street, EC3, and has been fully published (Merrifield 1955). Two of the coins disintegrated during cleaning but the rest were illustrated in the publication.

The coins have been preserved in an unworn condition. Their portraits portray life-like faces but are clearly distinct from any likeness of specific emperors. The legends and reverse engravings bear less resemblance to official types. The diameters have been recorded in figure 10:7 and twenty-seven coins fall within the restricted range of 17 mm to 14 mm,

inclusive. Die-axes are completely random.

The most important aspect of this hoard is the presence of related groups of die-identities. Twenty of the thirty coins studied are die-linked and come from the same workshop, which may have been local. Merrifield has carefully described the different dies and their combinations. No die-links beyond the hoard have yet been found, which serves to strengthen the prospect of local manufacture.

The die-groups from this hoard, as a whole, have been classified within the single group 'D', in chapter 4, because of their close inter-relationship and restriction to this deposit. The most numerous obverse and reverse types are shown as line drawings in figure 4:1. If these coins were produced at a London workshop it would be expected that further die-identities will eventually be found as more excavated coins from the city become available for study.

The Paternoster Row hoard

This large hoard of 542 antoniniani was discovered in 1961 and has been fully published (Mattingly 1967a). The regular component numbered just fifteen coins, ranging from Gallienus to Quintillus. The remaining 527 coins are barbarous radiates and provide a very large body of comparative material for study. It must be noted that this hoard is occasionally referred to as the Newgate Street hoard.

In contrast to the ^{few} more accurately copied imitations present in the Hollingbourne hoard, the Paternoster Row hoard contains a wide range of engraving styles, types and sizes. The diameters have again been recorded in figure 10:7. They range from 23 mm to 10 mm, with thirty falling into the minim

classification. These coins clearly represent the output of a variety of irregular mints and a wider chronological range than the Kent hoard imitations.

Mattingly has described and illustrated many of the most interesting barbarous radiates from the hoard. External style-links were found with groups identified elsewhere by the same author. The groups in question are; the spongy/blurred fabric group (chapter 4, group C), the Pax Aug group (chapter 4, group A) and the Invictus/ewer group (chapter 4, group B). Mattingly also identified a link between a highly distinctive copy which has a square-shaped portrait and Spes reverse and almost identical examples in the Hollingbourne hoard and from the Verulamium theatre (chapter 4, group N). Other examples of this group have subsequently been discovered in the current study and have been documented in this chapter, for Richborough and Canterbury.

Two further important die- and style-links have been discovered during this comparison of the Paternoster Row hoard. Single coins within each of the St Mard I and St Mard II hoards from Luxembourg were found by the authors of that report to share a reverse die (Lallemand and Thirion 1970, Pl.B, 15/3901). Another reverse die-link was found at Neatham (Hants), as described in chapter 7 (Plate 7:5, 36). Two further examples have been identified within the Paternoster Row hoard and both have been illustrated in Plate 7:5, 37-8, alongside the Neatham example, for comparison. The characteristic of the reverse of this type is the coupling of the Salus legend with the figure of Laetitia. Number 37, on Plate 7:5, is a reverse die-link. The obverse does not die-link but is very similar in appearance. Number 38 is less close but is considered to possess a similar obverse and

reverse to the other examples cited.

No links were found between the Paternoster Row and the Lime Street hoards. Neither have links been found between this hoard and the site finds from Roman London.

The Paternoster Row hoard contains a mixture of styles and sizes and has links with coins from different areas of England and Gaul. It represents an accumulation of coins from diverse sources and not the output of a local mint. However, the coins are very well preserved and are a most interesting collection. They are a useful source of comparison for other assemblages.

Surrey

Just four coins were recorded from the county of Surrey, at Guildford Museum. They all come from the small rural temple site at Farley Heath (TQ 0544). Despite the small number of coins in question, one example was found to die-link on both faces with an unprovenanced coin recorded by Sutherland (1937, Pl.5, 1). The Farley Heath example is illustrated in Plate 10:2, 27. The obverse portrait belongs to Tetricus II but the legend is of Victorinus. The reverse engraving depicts Invictus. The other imitations are one Divo Claudio, altar, and two of Tetricus I, both with the reverse Salus Augg.

Despite further enquiries, other collections from Surrey were not available for study and no significant sized assemblages from the county could be traced.

Essex

Unlike the situation for the other counties studied, it was not the intention to obtain a complete, or even a representative, listing of barbarous radiates from Essex. Originally, this

county was not to be included at all but during the course of the current research, excavated coins from the Colchester Archaeological Trust were made available for study. These offered a large comparative site assemblage at the edge of the survey area. Then, it was decided to also look at the large museum collection from the town, housed at Colchester Castle, for further comparison. In addition to these site finds, a large hoard from the county has also been studied in detail. This deposit of 300 minimi was discovered during excavation of the Roman religious complex at Ivy Chimneys, Witham, in 1979, by Essex County Council. This was a previously unpublished hoard and was recognised as being of significant importance to the current study, in the light of this writer's review of all barbarous radiate hoards (chapter 13). It would have been desirable to compare more Essex material, from sites such as Witham and Chelmsford. Unfortunately, time and resources available imposed a halt to the study at this point, leaving such comparison to a future occasion.

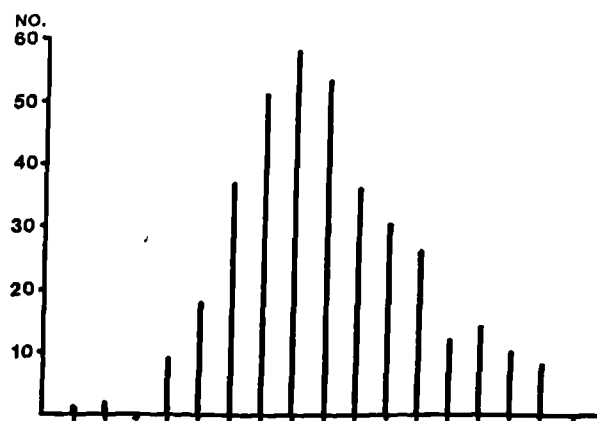
Colchester (TM 0025)

Excavations at the Roman colonia of Camulodunum were continued during the 1970's and 1980's by the Colchester Archaeological Trust. Work on seven separate sites within the modern town have produced a total of 353 barbarous radiates. These coins have been studied for the Trust and are published in Colchester Archaeological Report No. 4 (Davies 1987b). The results are also presented here, in the context of the current study of these coins.

The types present within the combined site assemblage are shown in figure 10:9. The diameters are recorded in figure 10:10, which is a bell-shaped graph, peaking at 16 mm. The

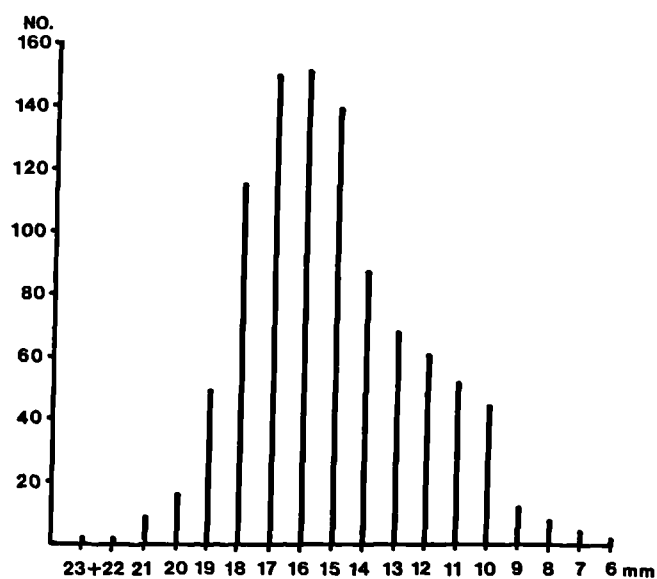
	<u>MUSEUM</u>			<u>ARCH.</u> <u>TRUST</u>	
	NO.	%		NO.	%
CENTRAL EMPIRE					
Gallienus					
Claudius II	4	0.4		4	1.1
Divo Claudio	161	16.5	- altar	15	4.2
	—		- eagle	3	0.8
				—	
TOTAL CENT. EMP.	165	16.9		24	6.8
GALLIC EMPIRE					
Postumus					
Victorinus					
- Invictus	31	3.2		14	4.0
- Pax Aug					
- Other	29	3.0		5	1.4
Total Victorinus	60	6.2		19	5.4
Tetricus I and II				3	0.8
- Fides Militum	5			1	0.3
- Hilaritas Augg	27	2.8		6	1.7
- Laetitia	13			7	2.0
- Pax Aug	80	8.2			
- Pietas Augg	37	3.8		60	17.0
- Princ Ivvent	3			15	4.2
- Salus Augg	34	3.5		25	7.1
- Spes	69	7.1		31	8.8
- Victoria/Comes Aug	11			10	2.8
- Virtus Augg	33	3.4		12	3.4
Tet. I, uncertain rev.				9	2.5
Tet. II, uncertain rev.	24			7	2.0
Total Tetrici	336			186	52.7
Other types	—			10	
TOTAL GALLIC EMP.	396	40.7		215	60.9
Uncertain minimi	189			61	
Unclassifiable	224			53	
GRAND TOTAL	974			353	
Total minimi	259	26.6		93	26.3

Fig.10:9 Summary of types from Colchester excavations
(1971-9) and Colchester Museum



Colchester Excavations

Fig.10:10 Coin diameters: Colchester excavations



Colchester Museum

Fig.10:11 Coin diameters: Colchester Museum

important and unusual coins recorded will be discussed by site, within the town. Those coins selected for discussion are illustrated in Plates 10:3 and 10:4, together with some coins from other sites, for comparison.

Balkerne Lane

Excavations in the vicinity of the Balkerne Gate, in the west of the town, produced 145 barbarous radiates, which is the largest group from a Colchester site. Two coins are clear hybrids of Tetrican/Victorinus originals. Plate 10:3, 1 carries an obverse legend of Tetricus I, while the reverse depicts Aequitas, as used by Victorinus. Number 2 shows an obverse of Tetricus II but the reverse carries the sun god Sol, from the Invictus type.

External style-links have been recognised. Plate 10:3, 3 is a member of the Invictus/ewer group and is particularly similar to examples from the Worthing hoard (Sussex), as shown in Plate 10:3, 4. Plate 10:3, 5 is again similar to a Sussex hoard coin. Both obverse and reverse resemble types present at Goring-on-Sea, as shown in Plate 10:3, 6.

Numbers 7 and 8 are additional members of the Invictus/ewer group. The occurrence of sub-styles within the overall group have already been suggested in previous chapters. These Colchester examples are particularly similar to others from Verulamium (Plate 8:3, 22, 26 and 30) and from the Paternoster Row hoard (Mattingly 1967a, Plate 7, 43-4). These all possess a more simplified but neat engraving and must be considered to comprise an eastern sub-group. No example of quite this kind has been found west of the Verulamium area.

Plate 10:3, 9 is a minim which has been derived from the Divo Claudio, eagle, category. A similar obverse engraving has

been recorded on a coin from Canterbury, on which the legend is also derived from Divv Claudio. Number 10 shows a bold engraving of Victorinus, with his Pax Aug reverse. Although not close enough in style to prove a common mint, this general bold style has been recorded on two other examples, from Silchester (Plate 7:1, 42, which has an Oriens reverse) and from the Paternoster Row hoard (not illustrated).

Lion Walk

At Lion Walk, in the south of the Roman town, parts of two courtyard houses were excavated. A total of 76 barbarous radiates were found, which embrace a great variety of engraving styles. Good copies, such as number 13 (a hybrid of Tetricus II with the Laetitia Aug reverse of Tetricus I, from Elmer 787) can be contrasted with the more clumsy engraving seen in number 14 (based on Elmer 774). Two unusual and clear minims are illustrated as numbers 15 and 16. The latter has a distinctive V shaped collar. Two copies of Claudius II show Mars holding an olive branch, which is a type not often reproduced (as RIC 68/9). Three altar reverses are illustrated on Plate 10:3, 22-4, all of which are minims, with reduced quality engravings.

Two examples of the Pax Aug group are present, as illustrated by number 17. These can be seen to reinforce the Sussex links seen at Balmerne Lane. Another interesting external link is shown in Plate 10:3, 18. This coin is stylistically similar to the square head/angular Spes group, previously found at Verulamium, the Hollingbourne hoard and Paternoster Row hoard (Mattingly 1967a) and at Richborough and Canterbury (this chapter). This example is not as stylistically close as the other examples and carries the Salus

Augg reverse, but the obverse is considered to be worth grouping with the previous examples. It is interesting to note that when all of these examples are listed, they all come from the east of England, with none further west than Verulamium. Their distribution is summarised in map form, in figure 10:13.

Plate 10:4, 1 is a minim which carries only a quarter of a die-impression but shows most of the portrait, with bold hooked nose, dashed lettering and dotted border. These same characteristics are also seen on other coins, which carry the same top-right bias of the die-impression. One example comes from Canterbury, as shown in Plate 10:4, 2, and one comes from Silchester (number 3). These all must be considered products of a common mint. Two others exhibit similarity to Canterbury coins. Number 4 possesses a close facial engraving to a Kentish coin (shown as number 5). Number 6 is a poorly executed example with indistinct features, especially a squashed nose, and is very similar to examples from both Canterbury and Richborough.

Culver Street

The Culver Street excavations were located in the south west of the Roman town. Sixty-five barbarous radiates were found. These include an unusual derivative of the Consecratio eagle reverse (Plate 10:3, 19). It carries a stylised eagle with widely spread wings, stretching across the whole flan. Plate 10:3, 21 is a very crude example of the Salus Augg type, on an irregular-shaped flan.

Note. Since the compilation of this report, subsequent excavations at Culver Street have found more barbarous radiates. These will be reported in a future publication (Davies, forthcoming b). One additional coin of note has been

found amongst them. It is a member of a die- and style-group first identified in the hoards of St Mard I and II from Luxembourg (Lallemant and Thirion 1970, Pl.B, 15/3901). One reverse die-link has been recorded at Neatham in Hampshire (Plate 7:5, 36) and one die- and one style-link have been found within the Paternoster Row hoard, from London (Plate 7:5, 37-8).

The other Colchester sites

The remaining barbarous radiates from Colchester originate from the excavations at Long Wyre Street, the Cups Hotel, Middleborough and the Butt road cemetery. These sites produced the respective numbers of 11, 25, 22 and 9 examples.

One coin from Middleborough combines a Tetricus I obverse with the Invictus reverse (Plate 10:3, 20). An example from Long Wyre Street is a very unusual example of a copy of Tacitus (AD 275-6) and this is the latest type represented in the whole Colchester assemblage (Plate 10:4, 7). Its obverse legend is clear and the reverse shows Mars advancing left. Other examples from Long Wyre Street include the following coins. Plate 10:4, 8 is a rare example of a completely silvered copy. This coin combines the reverse Salus Augg of Tetricus I with an obverse of Tetricus II. The earliest type represented among the Colchester imitations is a copy of Gallienus (number 9). The obverse is unclear and the reverse is blurred but unmistakably depicts a centaur walking left.

No die-links could be found within these coin groups. Neither were there any links with other areas.

The sizes of the ccins

The diameters of the Colchester barbarous radiates are recorded in figure 10:10. The graph shows a fine bell shape, with sizes ranging from 23 mm to 8 mm and with a peak at 16 mm. As was the case at Canterbury and Richborough, there is no second peak for minims, as was seen for western sites (chapter 6).

The proportions of minims at the Colchester sub-sites were consistently within the range between 22% and 28% of coin recovered, at Balkerne Lane, Lion Walk, Culver Street and Middleborough. The coin totals from Long Wyre Street and Butt Road were too small to provide comparative percentages. The proportion at Cups Hotel was much higher, at 40%. The reason for the difference at this single sub-site is unclear but may relate to fourth century use of the site. A large mid-fourth century hoard was discovered there. The barbarous radiate total from the area is not high (25) and it is clear that antoniniani were used in small numbers in the fourth century contexts (see Marlowe hoard section, Kent).

The barbarous radiates from Colchester Museum

The barbarous radiates housed in Colchester Castle Museum come from earlier excavations in the town and were sorted and identified by M.R.Hull, in common with the rest of the Roman coins in the collection. It was decided to study these coins for comparison with the more recently excavated examples. A summary list of the types present is presented in figure 10:9.

Time available did not enable this writer to search through the official coin runs to look for additional imitations. However, it was possible to sort through the 'official' Divo Claudio, Consecratio, run. Many of those coins have accordingly now been added to the irregular category. The

final total of barbarous radiates located in the museum trays was 974.

The museum coin diameters are recorded in figure 10:11. The diagram shows a peak at 16-17 mm and, once again, there is no minim peak present. The percentage of minims recorded is 26.6%, which compares very closely with the combined figure from the Trust's excavations, which was 26.3%.

Die and style-linking

The coin illustrated in Plate 10:4, 10 is very similar to a minim from Richborough, shown in the same Plate as number 11. Number 12 carries a strange reverse with a lanky figure, wearing a spiked crown, which probably derives from Sol. It has a dashed legend. This type is very similar to others seen at Richborough and Cirencester (shown in the same Plate, as 13-14). Number 15 is a minim with a particularly close obverse to another Richborough example, shown as number 16.

Plate 10:4, 17 shares characteristics with other coins from the Moneybury Hill hoard, Buckinghamshire (chapter 8). The portraiture is dissimilar but the flan is the same shape and size, with the same border, lettering and reverse figure (Davies 1982c, coins 22-3).

A coin similar to the square head/Spes group was found and is illustrated in Plate 10:4, 18. Finally, a very crudely engraved coin, with square jaw (Plate 10:4, 19) shares an obverse die with a site find from Cirencester, shown as number 20 here (and in Plate 6:1, 30, in the Cirencester section). The reverse of the Gloucestershire find contains a weird animal, walking right, and so these types were both derived from Gallienus originals.

Conclusions

The external links from both the Archaeological Trust and museum coins are summarised in figure 10:14. The results clearly show that Colchester was part of an eastern circulation zone during the 270's and 280's; having much less interplay with the west. There are particular associations with the assemblages from Richborough, Canterbury and Verulamium. The picture corresponds to that interpreted for Canterbury. The coin used in the east may have been struck in this part of England, or it may have been imported from other areas. However, once in circulation, it did not tend to leave the area. This pattern must reflect the extent of normal trading contacts and markets associated with the site at that time. The restricted pattern of linking contrasts markedly with that evidenced for the eastern military site of Richborough.

Some years ago, P.V.Hill thought that he had identified a Colchester barbarous radiate style (Hill 1951b). The examples illustrated in his paper have not been found to link with the coins studied here. No instances of internal die-linking have been found among the coins from the Archaeological Trust but two coins from Balcerne Lane do show some similarity of obverse engraving (Plate 10:3, 11-12). A single group of four coins is present within the museum collection, whose coins share similarities and two may die-link (Plate 10:4, 21-4). Numbers 21-2 share very close, if not identical, obverse dies which exhibit an unusual dotted beard and pointed nose. All four lack legends and display a long palm branch on the reverse, which is a derivative of Hilaritas. However, the obverses of numbers 23 and 24 are not at all similar. As a whole, though, it has not been possible to isolate positive instances of local production.

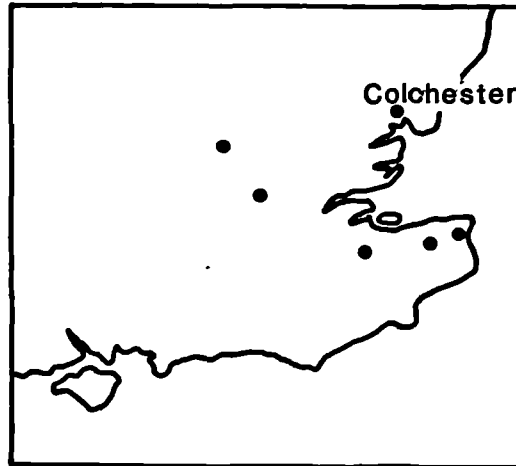


Figure 10:13
Distribution of
SPES Group types.

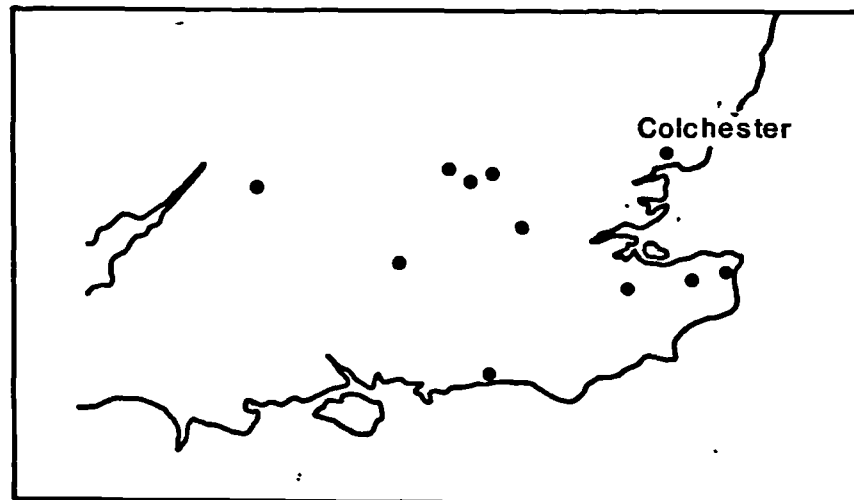


Figure 10:14 Colchester: all links.

Other finds from Essex

Just four other site finds have been recorded from Essex, all at the Passmore Edwards Museum. They are listed in the full catalogue. Two come from excavations at Goose Lane, Little Hallingbury, on the site of the M11. One is a copy of Victorinus' Invictus and the other is an illegible minim. The others come from the site of Woolston Hall Farm. One is a copy of Tetricus I's Virtus Augg and the other is illegible.

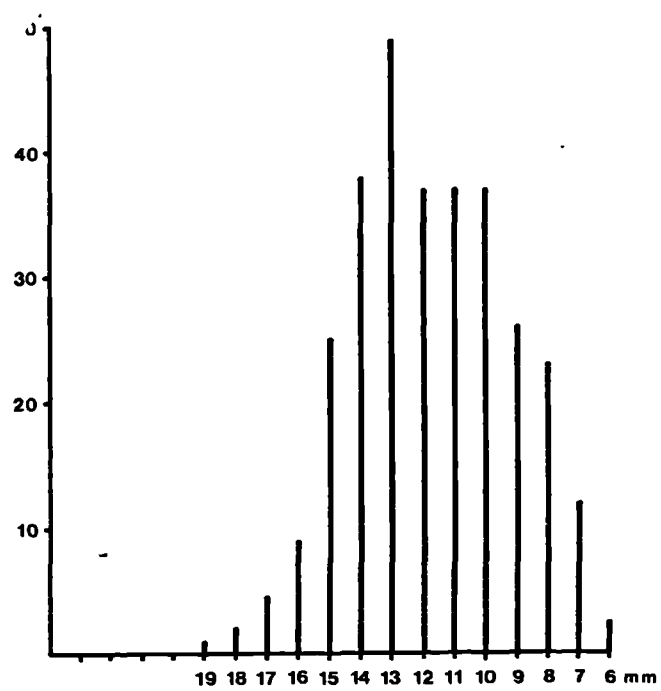
The Witham (1979) hoard

Excavations at the site of Ivy Chimneys, Witham, in 1979, discovered a hoard of 329 barbarous radiates, from a location adjacent to the site of a possible temple (Turner 1982). Witham is situated mid-way between Colchester and Chelmsford, and the site lies 150 m to the south of the main London to Colchester Roman road. The excavations were carried out by Essex County Council.

A detailed report and catalogue of the hoard, together with details of some site finds from the excavation, will be prepared for publication in the site excavation report (Davies, forthcoming a). The main findings from the 1979 hoard are presented here, together with photographs of 56 of the coins (Plate 10:5).

The 329 coins were found without a container but form a cohesive group. They may have been buried in an organic container, which has since perished. The vast majority of the coins show no signs of wear and do not appear to have been circulated. The types present in the hoard are summarised in figure 10:16.

Coin diameters have been recorded in figure 10:15, which shows that some 85% fall below the size of regular Gallic



Witham hoard

Fig.10:15 Coin diameters: the Witham hoard

CENTRAL EMPIRE	NO.	%
Gallienus		
Claudius II	2	0.6
Divo Claudio - altar	11	3.3
- eagle	0	
	—	
TOTAL CENT. EMP.	13	4.0
GALLIC EMPIRE		
Postumus		
Victorinus		
- Invictus	19	5.8
- Pax Aug	2	
- Other	<u>3</u>	
Total Victorinus	24	7.3
Tetricus I and II		
- Fides Militum	3	
- Hilaritas Augg	3	
- Laetitia	2	
- Mars Victor	2	
- Pax Aug	23	7.0
- Pietas	17	5.2
- Salus Augg	14	4.3
- Spes	8	
- Victoria/Comes Aug	2	
- Virtus Augg	3	
Tet. I, uncertain rev.	23	
Tet. II, uncertain rev.	<u>14</u>	
Total Tetrici	114	
Other types	86	
	—	
TOTAL GALLIC EMP.	224	68.1
Unclassifiable	<u>92</u>	
GRAND TOTAL	329	

Fig.10:16 Summary of types in the Witham (1979) hoard

Empire antoniniani (below approximately 15 mm) and some 74% are of minim size. The proportion of flans below 10 mm is greater than for either the Goring-on-Sea hoard or for the Hove hoard (chapter 9, figure 9:8). The Witham coins are particularly small.

In addition to their generally small size, these coins also tend not to carry legends. Over 60% of the coins show no lettering at all on either one or on both faces. These factors, together with some stylistic traits in common, point to the bulk of this hoard having come from a single source of manufacture. Other coins may have been added to the main group prior to deposition.

The types present

The small sizes of the coins indicates that they belong to the latest phase of barbarous radiate production. The absence of any regular coins would also support the late dating for the hoard, perhaps between the years 280-4. The reverse types portrayed are very abstract and clearly result from copying earlier imitations. Most are so far removed from official engravings that they are hard to classify. Despite these observations, none of the imitations are based on post-Tetrican issues.

The absence of legends, small size and indistinct types all contribute to the difficulty of classification, which is, inevitably, very subjective. A catalogue will accompany the published report. Only a small proportion of the Witham copies can be associated with a specific prototype. The distribution of these types does show a similar range to site collections.

Some of the more recognisable types are illustrated in Plate 10:5. Numbers 19-21 are Divo Claudio, altar, types. Number 23

is Salus Augg, 26-8 are Pietas, implements, derivatives and number 30 is Hilaritas. Two Victorinus copies are shown; number 25 is Invictus and 29 is Pax Aug. Examples with reverses that have become completely stylised, as geometric shapes, are numbers 9-11 and 22. Three 'pin figures' are shown, in numbers 16-18. Two indistinct female types are shown as numbers 31-2.

In addition to the common traits identified among the smaller coins en masse, a number of minims also exhibit similarity of style. Five are illustrated (numbers 1-5). They all have a curved jaw, enlarged eye in its socket and dotted beard (number 1). These features recur within the hoard. Numbers 9-11 were all struck from dies larger than their flan. They show only part of a portrait and have dashed hair. They all have geometric reverses.

External linking

Three coins are members of the Pax Aug group (numbers 6-8). There is also a single example of the Invictus/ewer group (number 13). This example resembles the form recorded at Richborough (Davies 1982b, Pl.2, 12-14). Two other coins carry a reverse depicting a stiff figure with right arm raised and resting a staff in the crook of the arm (14 and 15). This unusual type was recorded on a coin from Bitterne (Hants) whose obverse die-links with a coin from the Parvis, Notre Dame hoard, from Paris (Plate, 7:2, 5).

The small size of these coins and their general style compares closely with the range of imitations present in the large minim hoard found from the Verulamium theatre (Wheeler 1937). That hoard, comprising 800 tiny radiate imitations, was

studied at Verulamium Museum, for reference and photographs of the coins have been carefully compared with the Witham coins. Until this case, the Verulamium deposit has not had a close parallel in terms of composition or constituent coin size.

The Verulamium examples similarly lack legends and carry small simplified portraits and reverses, which are difficult to classify. However, this hoard does lack the larger-module component present in the Witham hoard. Examples of the Pax Aug group are present in both and each completely lack regular issues. Although no die-links could be found between them, specific similarities include:-

<u>Witham</u>			<u>Verulamium</u>
			(references to Wheeler 1937)
Plate 10:5	33		number 358
"	"	34	numbers 16-17
"	"	35	number 45

Twenty-four Witham coins with the general characteristics outlined are shown in Plate 10:5, for comparison with the Verulamium hoard illustrations (see Wheeler 1937, in which all coins are illustrated).

In conclusion, the Witham hoard comprises late imitations, struck during the final years of barbarous radiate production. The bulk of the hoard appears to represent an uncirculated group, which may or may not have been produced in this part of the Province.

The Witham hoard is unusual in that hoards containing large numbers of radiate minimi are rare in the south east of England. Many such hoards are known but they were predominantly buried in other areas. This observation will be expanded in chapter 13, during discussion of barbarous radiate hoards. The Witham hoard is also unusual in that it was

recovered from a site context datable, on other grounds, to the fourth century (Robin Turner, pers.comm.). The concept of the manufacture of barbarous radiates in the fourth century has long since been discredited (see chapter 2). The presence of this minor hoard in the south east of the country, so many years after the manufacture of these coins, would suggest their importation to Witham at a later date, for a specific function.

The function of the Witham site, as a religious complex, may provide the answers to these anomalies. The introduction of the coins to the site for votive purposes would help to explain the large number of late-third century coins in a fourth century context. The re-use of such coins in large numbers in the fourth century would be most exceptional if not connected with a votive function. The fourth century context for this hoard also means that the general observation concerning the location of minor hoards in Britain is not affected. The process of hoarding during the late-third century apparently resulted in the deposition of most minor hoards outside the south east. This discussion will be resumed in chapter 13.

Other barbarous radiate hoards from Essex

A total of five other hoards which contain barbarous radiates have been recorded from Essex. These will all be considered in chapter 13. Two of them, with provenances of 'Colchester' and 'Near Colchester' have an odd (potentially unreliable) composition and an uncertain origin, respectively (chapter 13, appendix 2). The other three, from Great Chesterford, Epping Forest and from Oliver's Orchard (just outside Colchester) are very different in composition to the Witham (1979) hoard (see chapter 13, appendix 3). They contain substantial proportions

of regular antenniani and in no case does the percentage of irregular ccins exceed 8%. These hoards belong to the earlier years of barbaricus radiate production, before the widespread manufacture of minims.

The eastern counties - a summary

This coverage of the eastern counties of England has featured some very large site collections and some interesting hoards, with a sprinkling of smaller site collections, particularly from Kent. Coins belonging to some major die/style-groups have been found across the area. In particular, the recognition of square head/Spes group and Invictus/ewer sub-group ccins has pointed to the existence of a circulation zone restricted to the south east. The complete pattern of linking identified for the sites of Canterbury and Colchester similarly suggests that there was a circulation zone which was largely restricted to the south eastern counties. More widespread linking within Britain was evidenced in the case of the military site of Richborough and the large Paternoster Row hoard. Continental die-links have been recorded from Canterbury, Colchester and the hoards from Paternoster Row and Hollingbourne.

Graphs of coin sizes from the south east exhibit a straightforward bell-shape, unlike the sites from the west of England. Minims do not present a secondary peak within these graphs. Despite the large number of hoards recorded within the eastern counties described here, only the Witham deposit, which appears to have been introduced to the site during the fourth century in a votive context, can be termed a minim hoard. Such hoards are almost exclusively restricted to other parts of Britain.



Plate 10:1 Canterbury. Scale 1:1

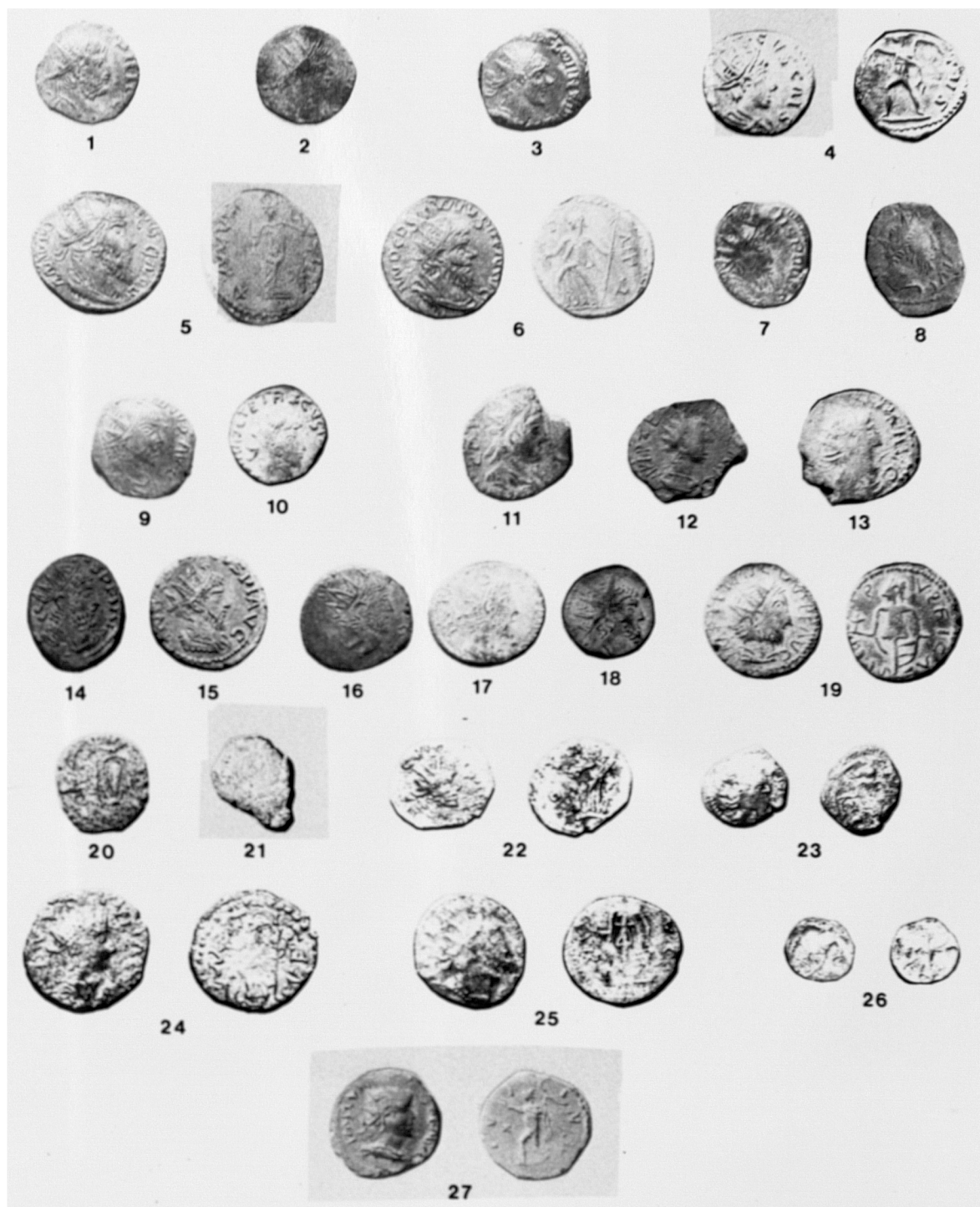


Plate 10:2 Hollingbourne Hoard, London and Farley Heath.
Scale 1:1

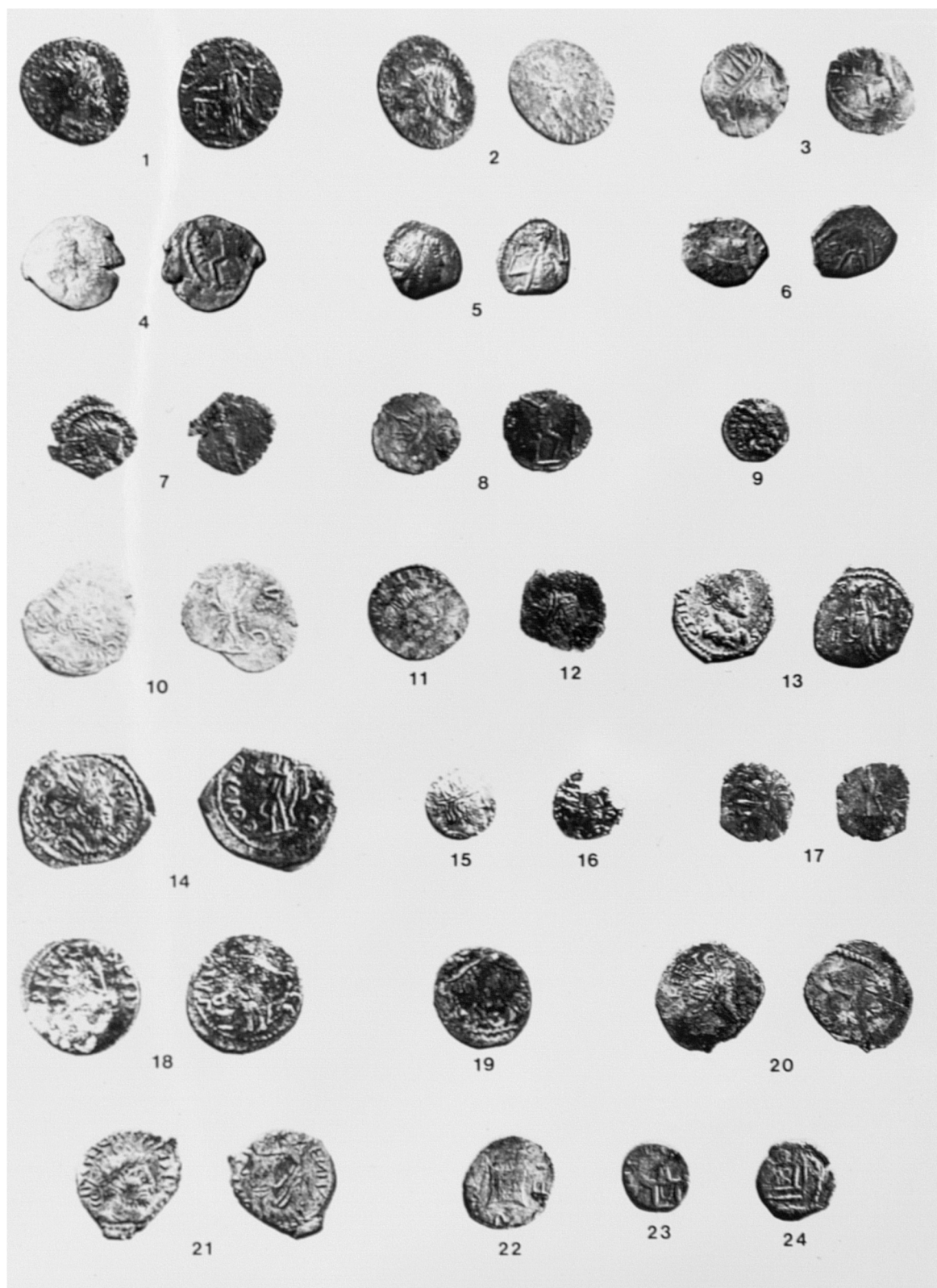


Plate 10:3 Colchester. Scale 1:1

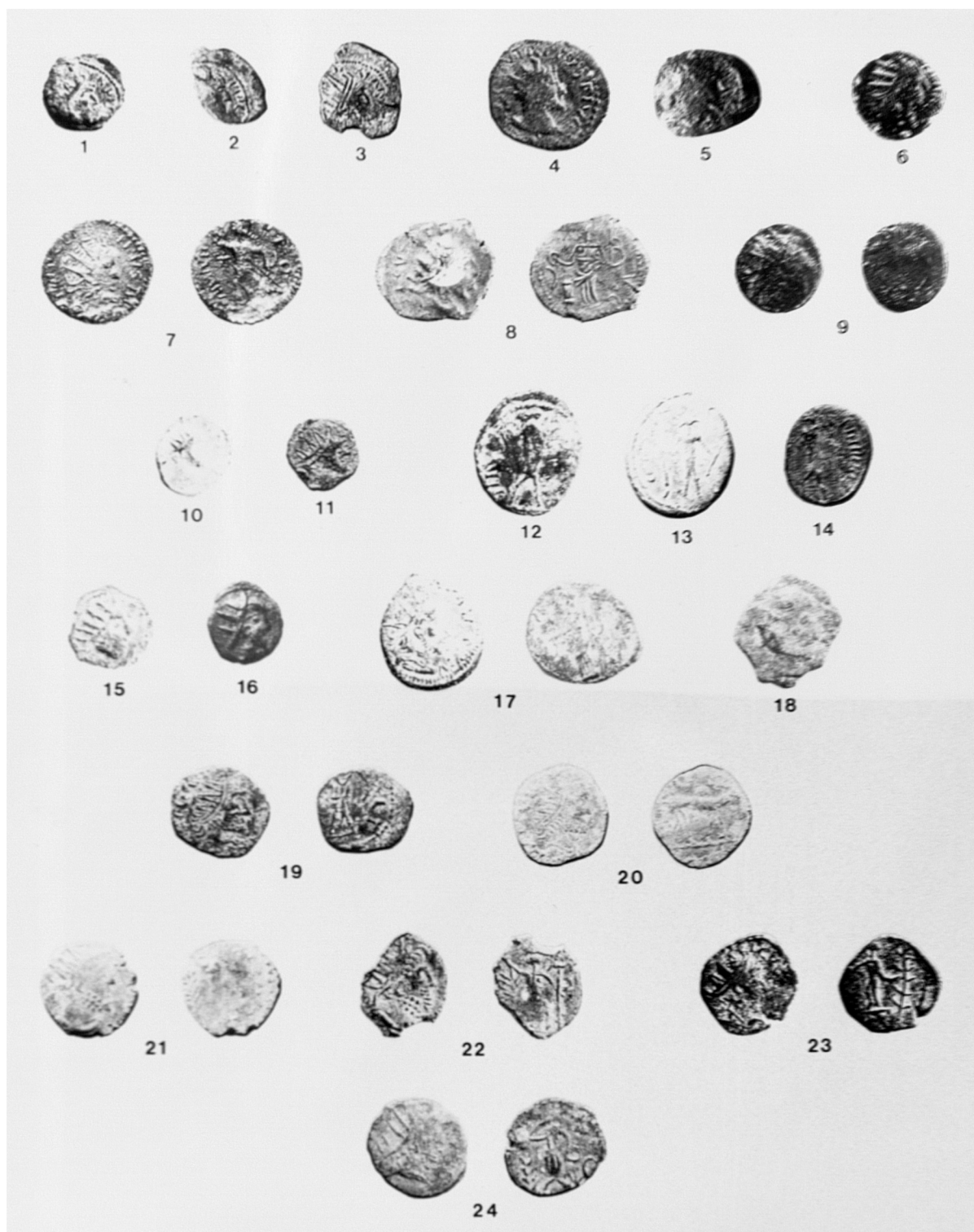


Plate 10:4 Colchester. Scale 1:1

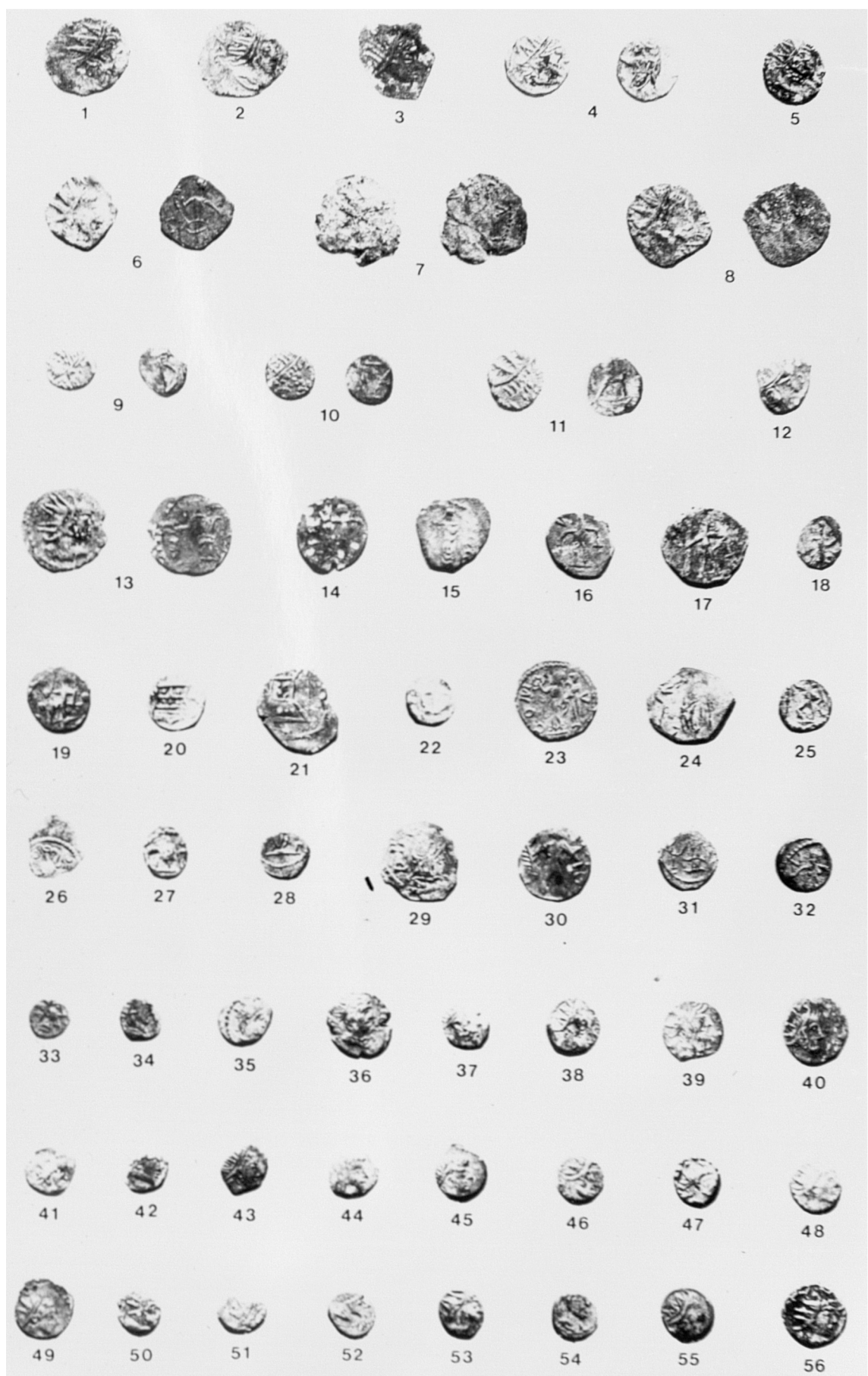


Plate 10:5 The Witham Hoard. Scale 1:1